

Service Manual

ViewSonic VX2240W-4

Model No. VS11985

22" Color TFT LCD Display

(Manufacture date: NOV. 2008)

VX2240W-4

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Product disposal at end of product life

The lamp in this product contains mercury. Please dispose of in accordance with local, state or federal laws.

Revision History

Revision	SM Editing Date	ECR Number	Description of Changes	Editor
A01	NOV. 08		Initial Release	
			TC6MNBBDTNWVWN	
			TC6MNBBDTNWVWNND	
			TC6MNBHKNWVSN	
			TC6MNBHKNWVSNND	
			TC6MNBDDNWVSNNN	
			TC6MNBDDNWVSNNND	

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1. Precautions and Safety Notices

1.1 safety precautions

This monitor is manufactured and tested on a ground principle that a user's safety comes first. However, improper use or installation may cause damage to the monitor as well as the user. Carefully go over the following WARNINGS before installing and keep this guide handy.

WARNINGS

This monitor should be operated only at the correct power sources indicated on the label on the rear end of the monitor. If you're unsure of the power supply in your residence, consult you local dealer or power company.

- Use only the special power adapter that comes with this monitor for power input.
- Do not try to repair the monitor your self as it contains no user-serviceable parts. This monitor should only be repaired by a qualified technician.
- Do not remove the monitor cabinet. There is high-voltage parts inside that may cause electric shock to human bodies, even when the power cord is unplugged.
- Stop using the monitor if the cabinet is damaged. Have it checked by a service technician.
- Put your monitor only in a clean, dry environment. If it gets wet, unplug the power cable immediately and consult your service technician.
- Always unplug the monitor before cleaning it .Clean the cabinet with a clean, dry cloth. Apply non-ammonia based cleaner onto the cloth, not directly onto the glass screen.
- Keep the monitor away from magnetic objects, motors, TV sets, and transformer.
- Do not place heavy objects on the monitor or power cord.

1.2 Product safety notice

Many electrical and mechanical parts in this chassis have special safety visual inspections and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltages, wattage, etc. Before replacing any of these components read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire ,or other hazards.

1.3 Service notes

When replacing parts or circuit boards, clamp the lead wires around terminals before soldering.

When replacing a high wattage resistor(more than 1W of metal oxide film resistor) in circuit board, keep the resistor about 5mm away from circuit board.

Keep wires away from high voltage, high temperature components and sharp edges.

Keep wires in their original position so as to reduce interference.

Usage of this product please refer to also user's manual.

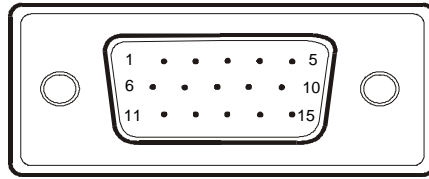
2. Specification

2.1 Product specifications

Region	VSA	VSAP	VSE	VSCN
	(M)	(A) & (K)	(EU)	(G)
Product Name	VX2240w			
Model Number	VS11985			
OSD Languages	English, French, German, Italian, Spanish, Finnish, Russian, Korean, Japanese, Traditional Chinese, Simplified Chinese			
TFT LCD Panel and Model #	CMO A220Z5			
Scalar	Model # : Novatek NT68670HTFG			
Input Signal	D-Sub / DVI-D			
Sync Compatibility	Separate / Composite / SOG			
Power Consumption	Built-in/ under 55W (max) / 45W(typ)			
Power Cable	Refer to Appendix G			
Analog Cable (1.8 m, color : black), with PC 2001 and Hot Plug Detect &DDC	YES			
DVI-D Cable / 1.8m	YES			
ViewSonic CD Wizard	Arabic, English, Finnish, Spanish, German, Italian, Japanese, Swedish, Polish, Korean Portuguese, Russian, French, Greek, Dutch, Turkish, Simplified Chinese, Traditional Chinese, Czech, Hungarian			
ViewSonic Quick Start Guide				
Screen Protector Mylar	YES			
Extrme Label (up to 2ms)	YES			
Service Insert (new version)	YES	NO	NO	NO
Warranty Sticker	NO	NO	NO	NO
Warranty Card	NO	NO	NO	YES
Carton Sticker	NO	NO	NO	YES
PE bag of Carton	NO	NO	NO	YES

2.2 Interface description

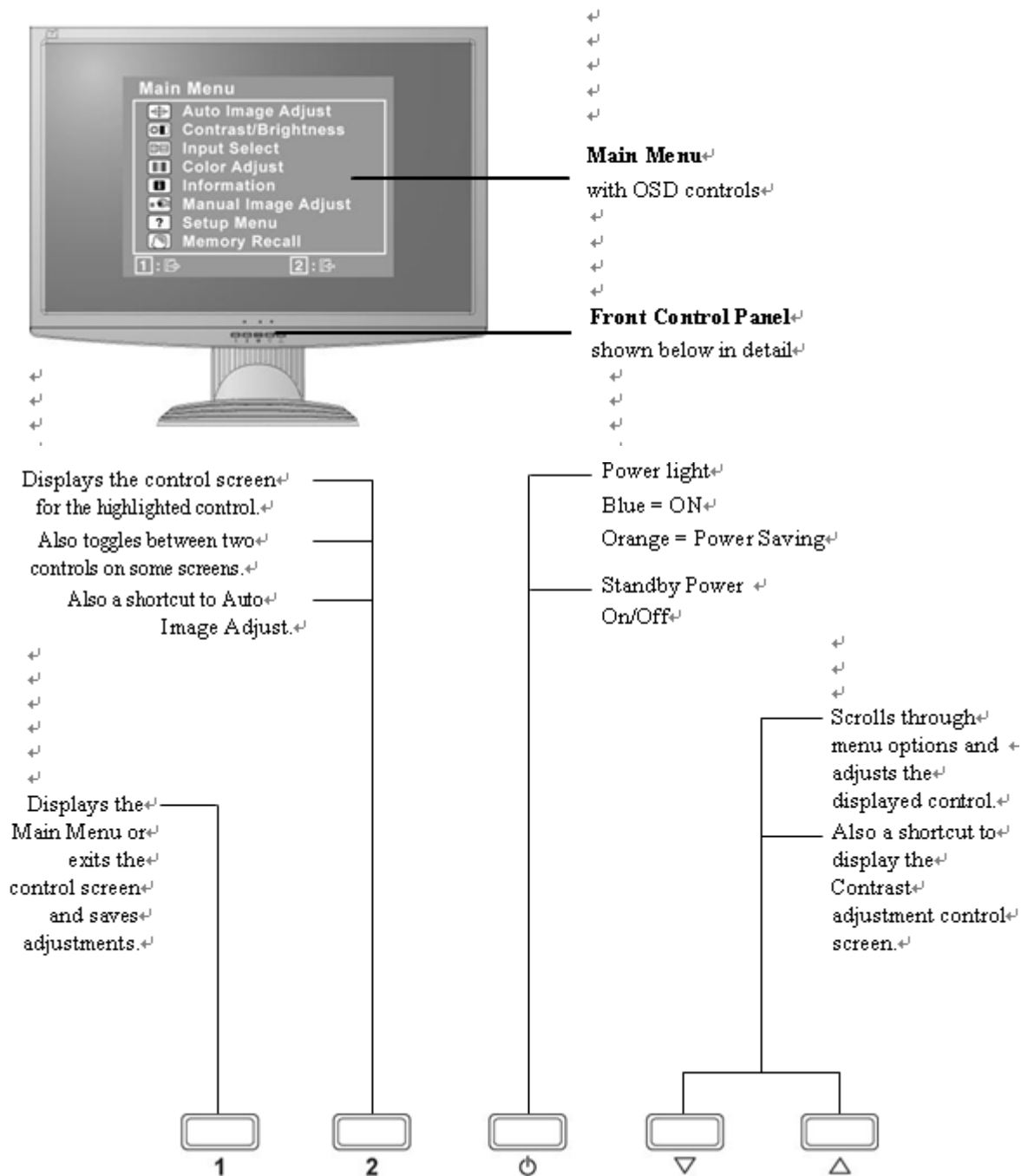
15 pin D-sub connector pin assignment



Pin Number	Pin Function
1	Red video input
2	Green video input
3	Blue video input
4	No Connection
5	Ground
6	Red video ground
7	Green video ground
8	Blue video ground
9	+5V
10	H/V sync ground
11	No connection
12	(SDA)
13	Horizontal sync (Composite sync)
14	Vertical sync
15	(SCL)

3. Front Panel Function Control Description

Use the buttons on the front control panel to display and adjust the OSD controls which display on the screen. The OSD controls are explained at the top of the next page and are defined in “Main Menu Controls”





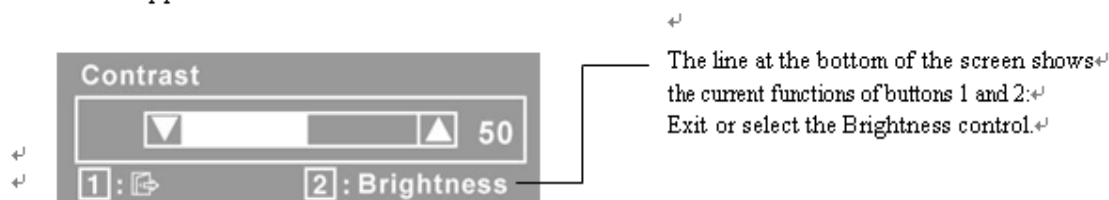
Do the following to adjust the display setting:



1. To display the Main Menu, press button [1].



NOTE: All OSD menus and adjustment screens disappear automatically after about 15 seconds. This is adjustable through the OSD timeout setting in the setup menu.






2. To select a control to adjust, press  or  to scroll up or down in the Main Menu.
3. After the desired control is selected, press button [2]. A control screen like the one shown below appears.



4. To adjust the control, press the up  or down  buttons.
5. To save the adjustments and exit the menu, press button [1] *twice*.

Main Menu Controls

Adjust the menu items shown below by using the up and down buttons.

Control	Explanation
	<p>Auto Image Adjust automatically sizes, centers, and fine tunes the video signal to eliminate waviness and distortion. Press the [2] button to obtain a sharper image.</p> <p>NOTE: Auto Image Adjust works with most common video cards. If this function does not work on your LCD display, then lower the video refresh rate to 60 Hz and set the resolution to its pre-set value.</p>
	<p>Contrast adjusts the difference between the image background (black level) and the foreground (white level).</p>
	<p>Brightness adjusts background black level of the screen image.</p>
	<p>Input Select toggles between inputs if you have more than one computer connected to the LCD Display.</p> <div data-bbox="502 884 997 1086"><p>Input Select</p><p>D-SUB</p><p>DVI</p><p>1: [arrow icon] 2: [arrow icon]</p></div>
	<p>Color Adjust provides several color adjustment modes, including preset color temperatures and a User Color mode which allows independent adjustment of red (R), green (G), and blue (B). The factory setting for this product is 6500K (6500 Kelvin).</p> <div data-bbox="311 1384 842 1733"><p>Color Adjust</p><p>sRGB</p><p>9300K</p><p>7500K</p><p>6500K</p><p>5400K</p><p>User Color</p><p>1: [arrow icon] 2: [arrow icon]</p></div>

sRGB-This is quickly becoming the industry standard for color management, with support being included in many of the latest applications. Enabling this setting allows the LCD display to more accurately display colors the way they were originally intended. Enabling the sRGB setting will cause the Contrast and Brightness adjustments to be disabled.

9300K-Adds blue to the screen image for cooler white (used in most office settings with fluorescent lighting).

7500K - Adds blue to the screen image for cooler white (used in most office settings with fluorescent lighting).

6500K-Adds red to the screen image for warmer white and richer red.

5400K-Adds green to the screen image for a darker color.

User Color Individual adjustments for red (R), green (G),and blue (B).

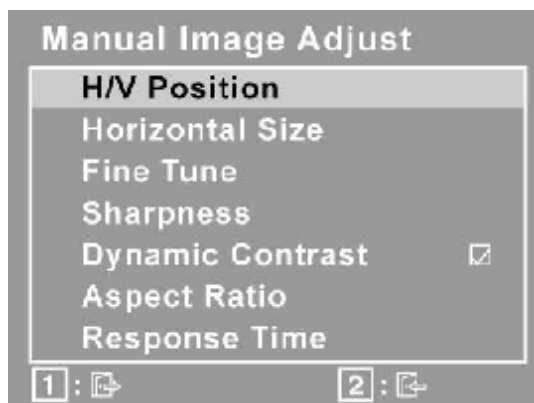
1. To select color (R, G or B) press button [2].

2. To adjust selected color, press and .

Important: If you select RECALL from the Main Menu when the product is set to a Preset Timing Mode, colors return to the 6500K factory preset.

Information displays the timing mode (video signal input) coming from the graphics card in the computer, the LCD model number, the serial number, and the ViewSonic® website URL. See your graphics card's user guide for instructions on changing the resolution and refresh rate (vertical frequency).

NOTE: VESA 1680 x 1050 @ 60Hz (recommended) means that the resolution is 1680 x 1050 and the refresh rate is 60 Hertz.



H./V. Position (Horizontal/Vertical Position) moves the screen image left or right and up or down.

H. Size (Horizontal Size) adjusts the width of the screen image.

Fine Tune sharpens the focus by aligning text and/or graphics with pixel boundaries.

NOTE: Try Auto Image Adjust first.

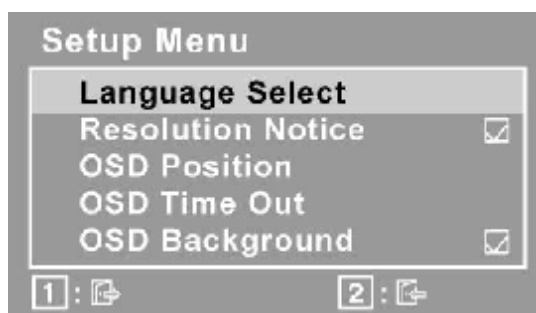
Sharpness adjusts the clarity and focus of the screen image.

Dynamic Contrast allows the user to turn the contrast ratio enhancement on or off.

Aspect ratio Selects the image size for 4:3 & full screen.

Response Time adjusts the response time of liquid-crystal display for image quality enhancement.

Setup Menu displays the menu shown below:



Language Select allows the user to choose the language used in the menus and control screens.

Resolution Notice advises the optimal resolution to use.

OSD Position allows the user to move the OSD menus and control screens.

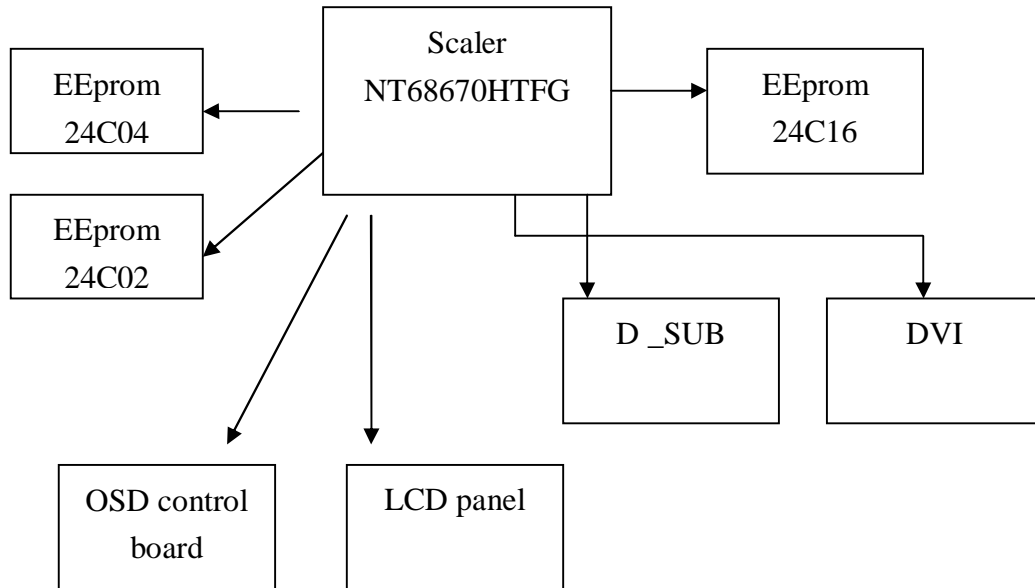
OSD Timeout sets the length of time the OSD screen is displayed. For example, with a “15 second” setting, if a control is not pushed within 15 seconds, the display screen disappears.

OSD Background allows the user to turn the OSD background On or Off.

Memory Recall returns the adjustments back to factory settings if the display is operating in a factory Preset Timing Mode listed in the Specifications of this manual.

Exception: This control does not affect changes made with the User Color control, Language Select or Power Lock setting.

4. Circuit Description



The NT68670 is a highly integrated flat panel display controller that interfaces analog, digital, and video inputs. It combines a triple ADC, a DVI compliant TMDS receiver, a digital YUV receiver, a high quality zoom and shrink engine, a multi-color on screen display (OSD) controller, an advanced color engine, an liquid crystal display accelerator over – driving that embedded 1Mx16 SDRAM and many other functions in a single chip. It provides the user with a simple, flexible and cost-effective solution for various flat panel display products.

The NT68670 operates at frequencies up to 170MHz, suitable for LCD monitor up to UXGA resolution. The NT68670 also has a built-in noise reduction function to provide more stable video quality, spread spectrum to provide low EMI solution, sRGB for video color space convert and post pattern for manufacture test.

The display provided multi-interface with timing controller or without timing controller. With timing controller provided single/double pixel clock RSDS interface; without timing controller provide single/double pixel clock LVDS interface.

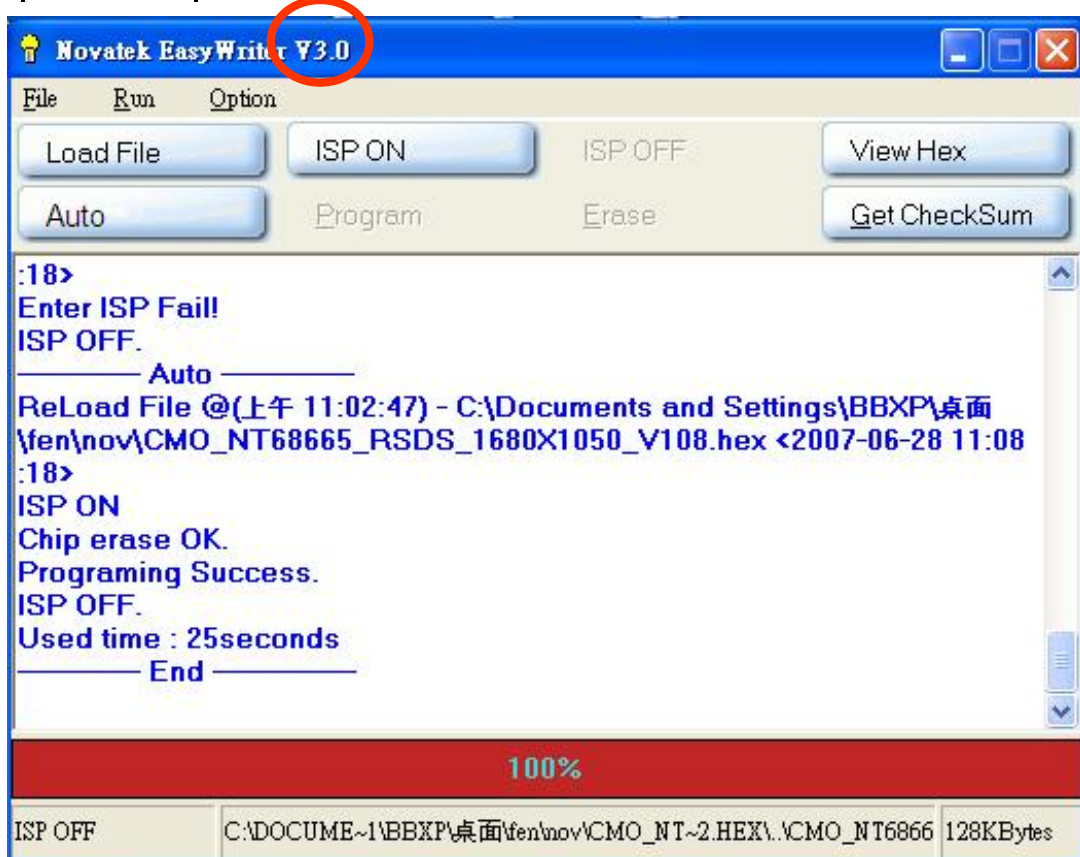
In addition, NT68670 includes an integrated 8-Bit Microcontroller (MCU). It contains an 8-bit 8031 micro-controller, 1,280-bytes internal data memory, four 7-bit resolution A/D Converter, 10-channel 8-bit resolution PWM DAC, two 16-bit timer/counters, and a UART. Except those, it has two-channel hardware DDC solution, and VESA 2Bi/2B+ master/slave I2C bus interface.



Writer Ver 3.0

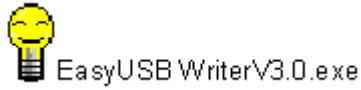


Writer.exe



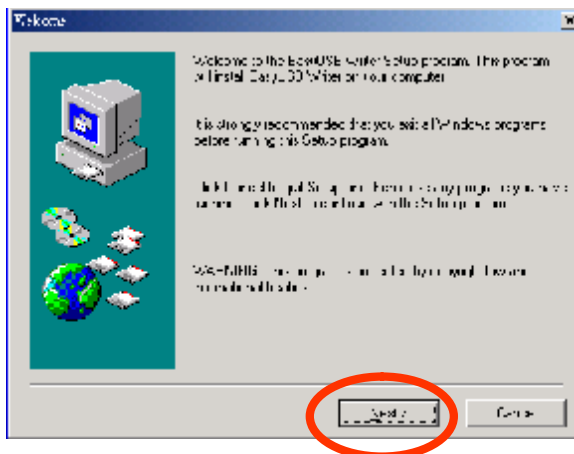
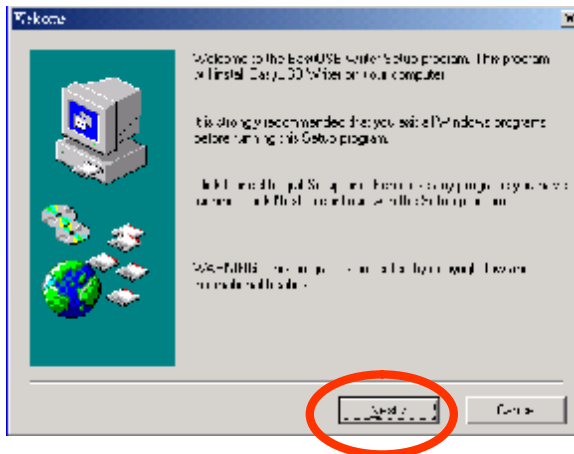
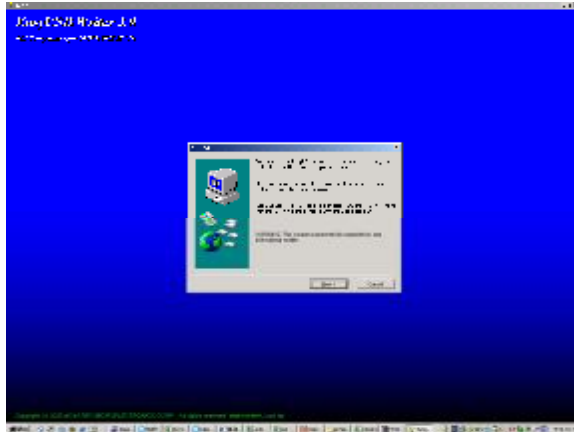
Setp1:

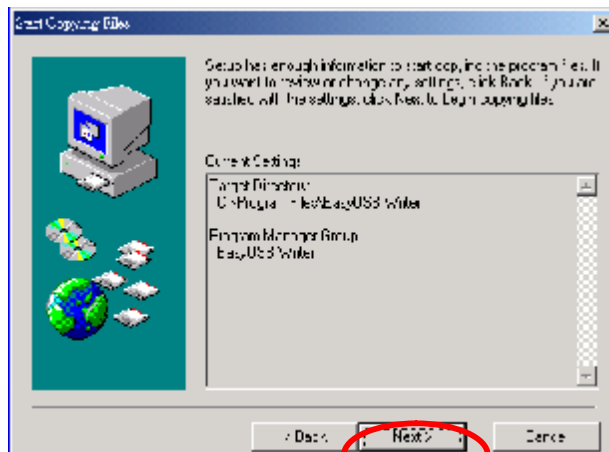
Setup EasyUSB WriterV3.0.exe

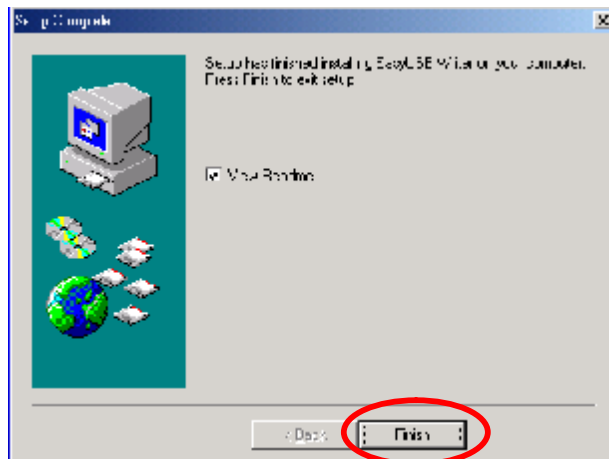


Setp2:

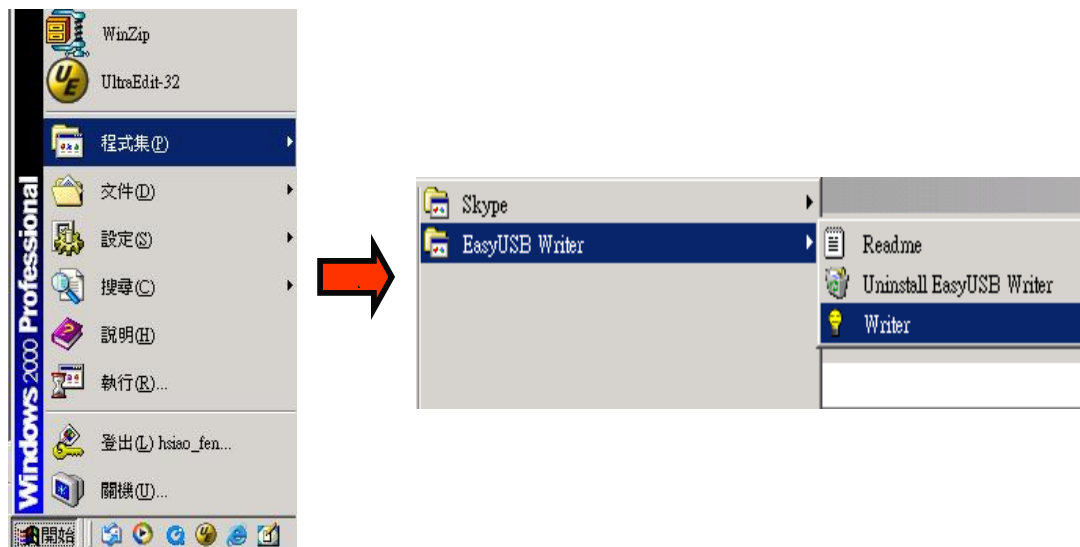
Enter :



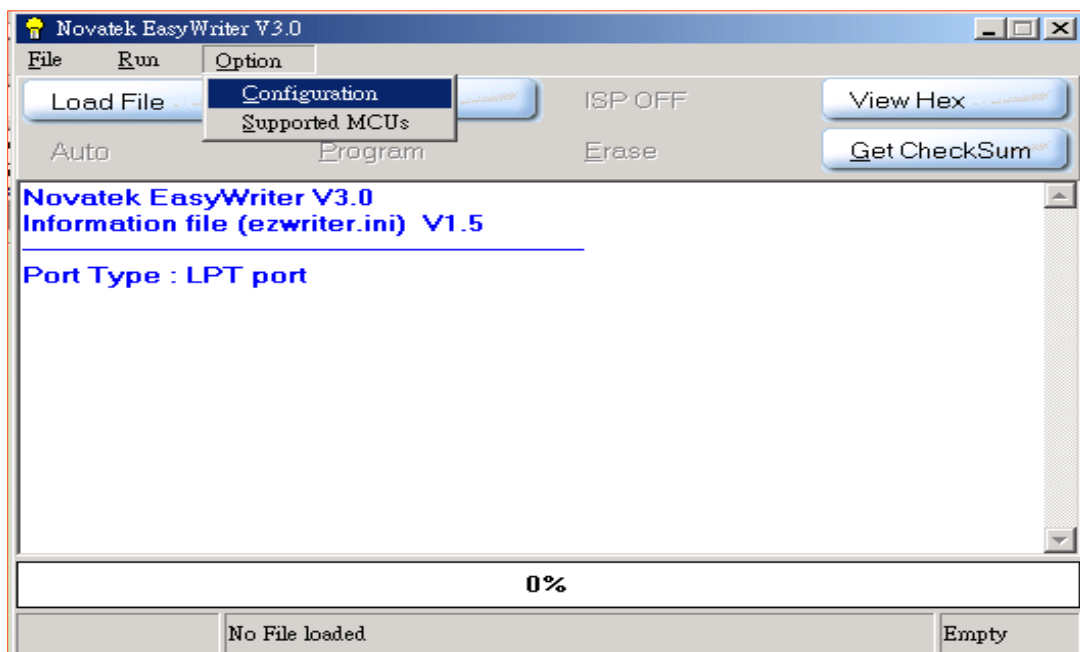


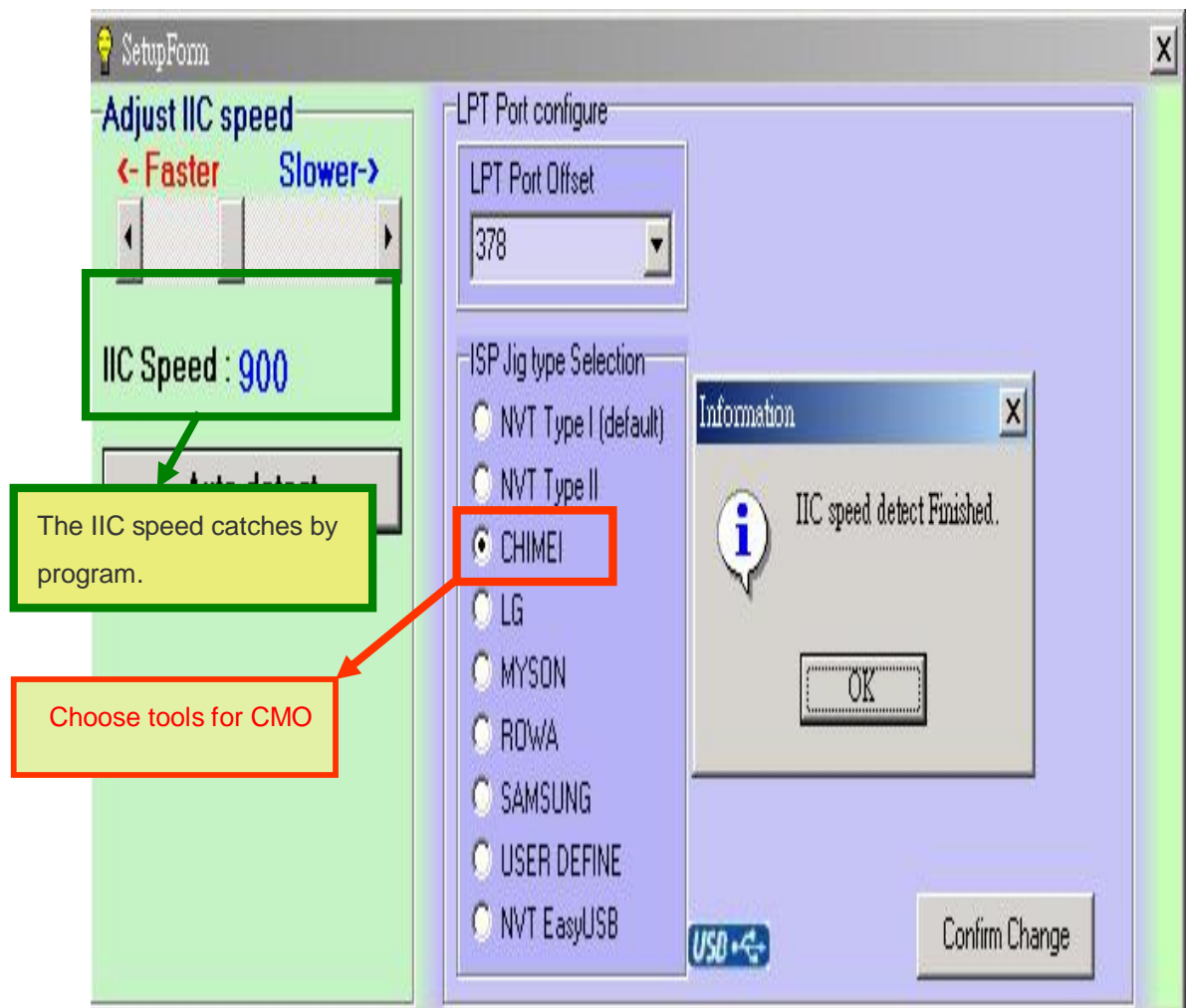


Step 3 :
Find Writer in this program.

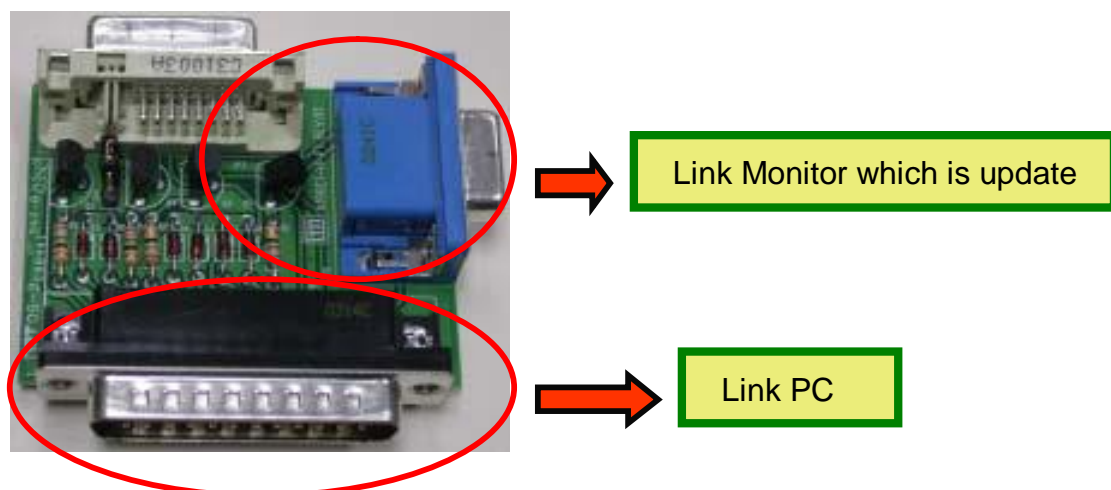


Step 4 :
Optionà Configurationà CHIMEIà Confirm change

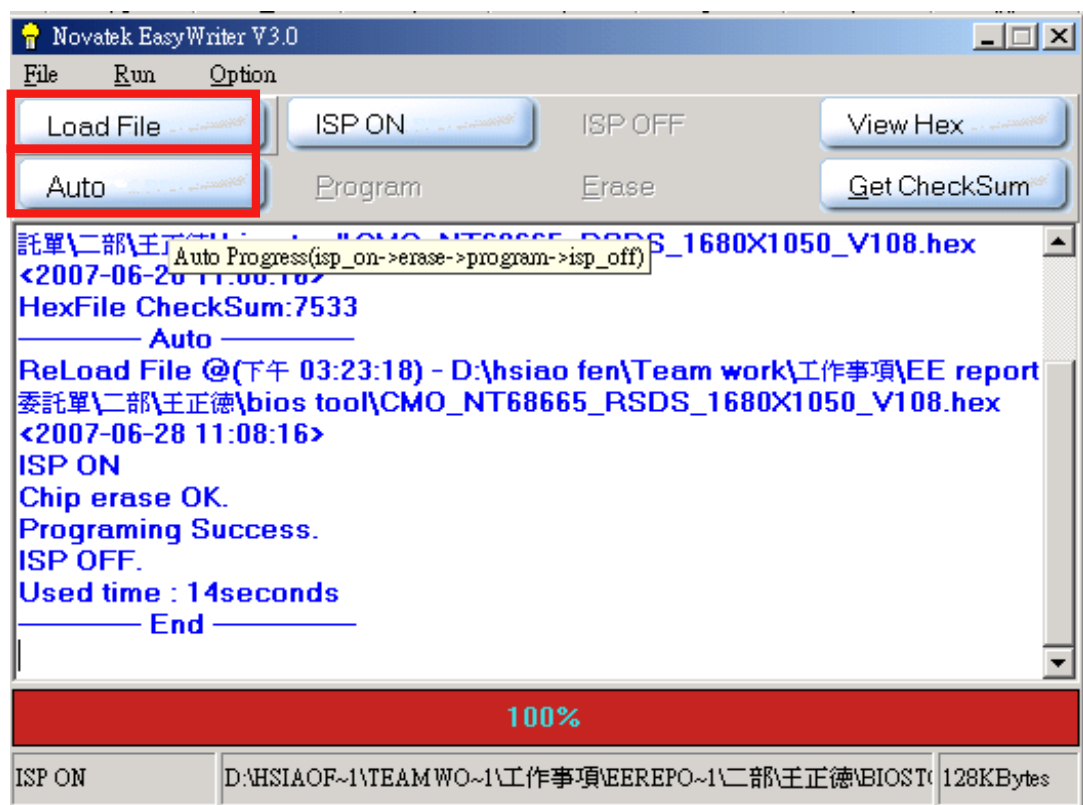




Step 5 :
Print to D-Sub and DVI-D



Step 6 :
BIOS update:
Load File → Auto → Finish



5. Adjustment Procedure

1. All Modes Reset

You should do “All Model Reset” (Refer to Chap 3. Hot Keys for Function Controls) first. This action will allow you to erase all end-user’s settings and restore the factory defaults.

2. Auto Image Adjust

The Auto Adjust is aimed to offer a best screen quality by built-in ASIC. For optimum screen quality, the user has to adjust each function manually.

A. Turn the computer and LCD monitor on.

B. Press the ‘**Auto**’ button on monitor keypad to Auto Adjust.

C. The LCD monitor will start the Auto Adjust process automatically and run for 10 consecutive seconds, during which time you will notice the image change.

3. Firmware

Test Patten: Burn in Model (Refer to Chap3. Hot Keys for Function Control)

-Make sure the F/W is the latest version.

4. DCC

Test Patten: EDID program

-Make sure it can pass test program.

5. Window Shut Down

Test Signal: 1280*1024@60Hz

Test Pattern:



Checkered Pattern Every One Pixel (50%Green & 50%Blue)

Inspection Item: Flicker, Mura

6. Window BG

Test Signal: 1280*1024@60Hz

Test Pattern:



Window standard pattern

Inspection Item: Line Defect, Function Defect & Mura

7. 25 Gray

Test Signal: 1280*1024@60Hz

Test Pattern:



Full Screen 25% White (Gray)

Inspection Item: Particle, Line Defect & Mura

8. 50 Gray

Test Signal: 1280*1024@60Hz

Test Pattern:



Full Screen 50% White (Gray)

Inspection Item: Bright Dot, Particle, Line Defect & Mura

9. White Box

Test Signal: 1280*1024@60Hz

Test Pattern:



Window standard pattern

Inspection Item: Particle, Line Defect, Power, Image Remain & Mura

10. Black Box

Test Signal: 1280*1024@60Hz

Test Pattern:



Window standard pattern

Inspection Item: Bright Dot, Line Defect & Power

11. RED

Test Signal: 1280*1024@60Hz

Test Pattern:



Full Screen Red

Inspection Item: Bright Dot, Partial & Line Defect

12. Green

Test Signal: 1280*1024@60Hz

Test Pattern:



Full Screen Green

Inspection Item: Bright Dot, Partial & Line Defect

13. Blue

Test Signal: 1280*1024@60Hz

Test Pattern:



Full Screen Green

Inspection Item: Bright Dot, Partial & Line Defect

14. Gray_Scale_0-100_V64

Test Signal: 1280*1024@60Hz

Test Pattern:



Vertical 64 (256) Gray Scale (Right → Left , From 0 to 100% White)

Inspection Item: Line Defect & Function Defect

Function Test Display pattern

Item	Pattern	Description	Remark
1	Gray_Scale_0-100_V	Vertical 64 (256) Gray Scale (右→左, From 0 to 100% White)	Figure 1
2	Gray_Scale_0-100_H	Horizontal 64 (256) Gray Scale (上→下, From 0 to 100% White)	Figure 2
3	Black	Full Screen Black	Figure 3
4	Red	Full Screen 50% Red	Figure 4
5	Green	Full Screen 50% Green	Figure 5
6	Blue	Full Screen 50% Blue	Figure6
7	White	Full Screen White	Figure7
8	Black_Tile	Black Tile Under White Background	Figure 8

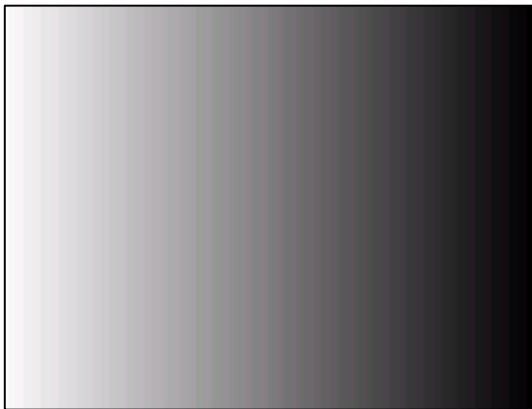


Figure 1



Figure 2

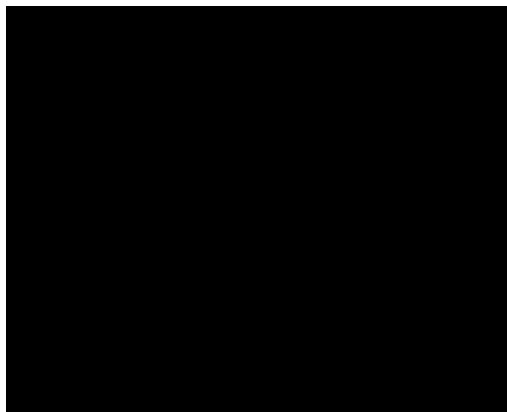


Figure 3



Figure 4

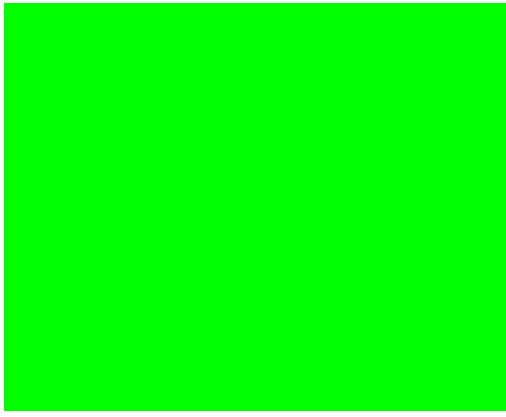


Figure 5



Figure 6

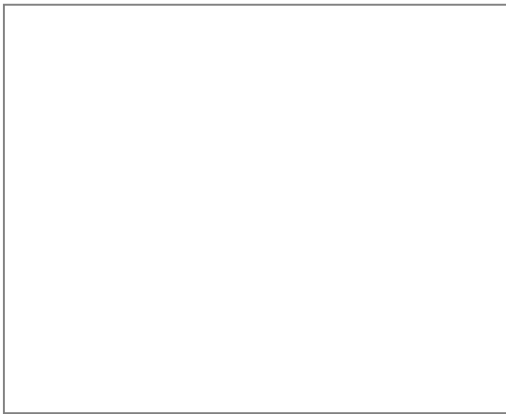


Figure 7

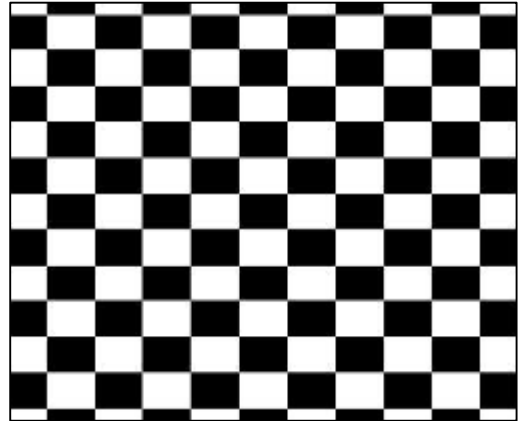


Figure 8

6. Troubleshooting

No power

- Make sure power button (or switch) is ON.
- Make sure A/C power cord is securely connected to the LCD display.
- Plug another electrical device (like a radio) into the power outlet to verify that the outlet is supplying proper voltage.

Power is ON but no screen image

- Make sure the video cable supplied with the LCD display is tightly secured to the video output port on the back of the computer. If the other end of the video cable is not attached permanently to the LCD display, tightly secure it to the LCD display.
- Adjust brightness and contrast.
- If you are using an Macintosh older than G3, you need a Macintosh adapter.

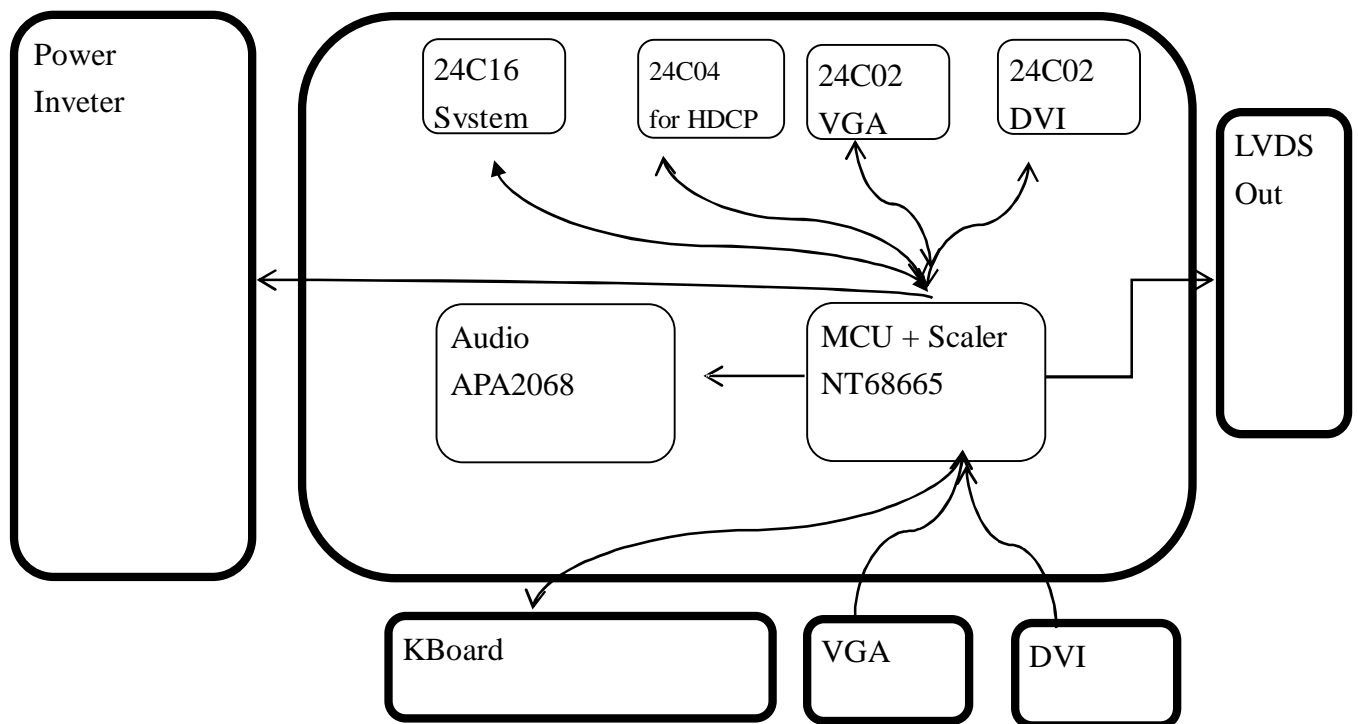
Wrong or abnormal colors

- If any colors (red, green, or blue) are missing, check the video cable to make sure it is securely connected. Loose or broken pins in the cable connector could cause an improper connection.
- Connect the LCD display to another computer.
- If you have an older graphics card, contact ViewSonic® for a non-DDC adapter.

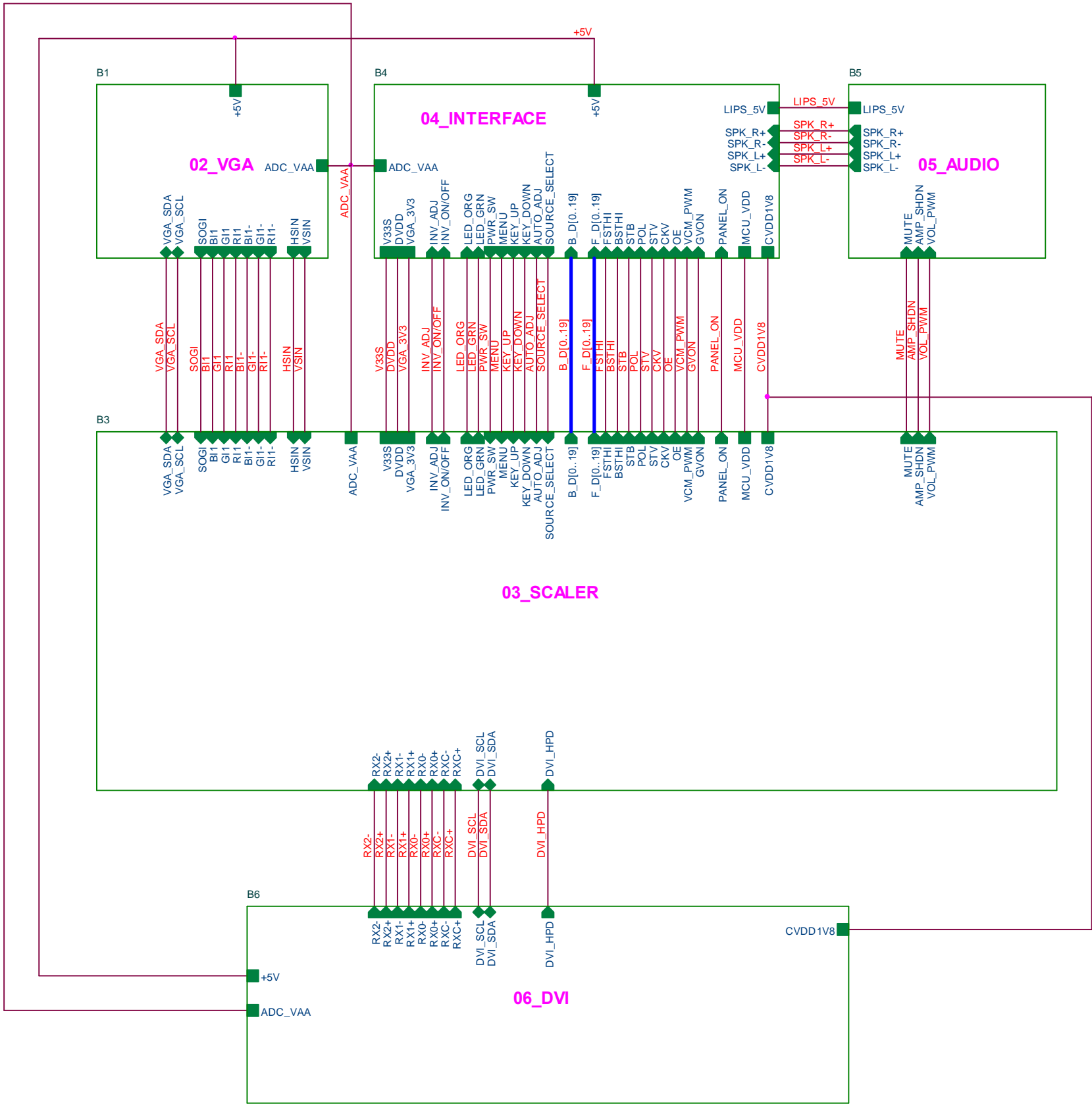
Control buttons do not work

- Press only one button at a time.

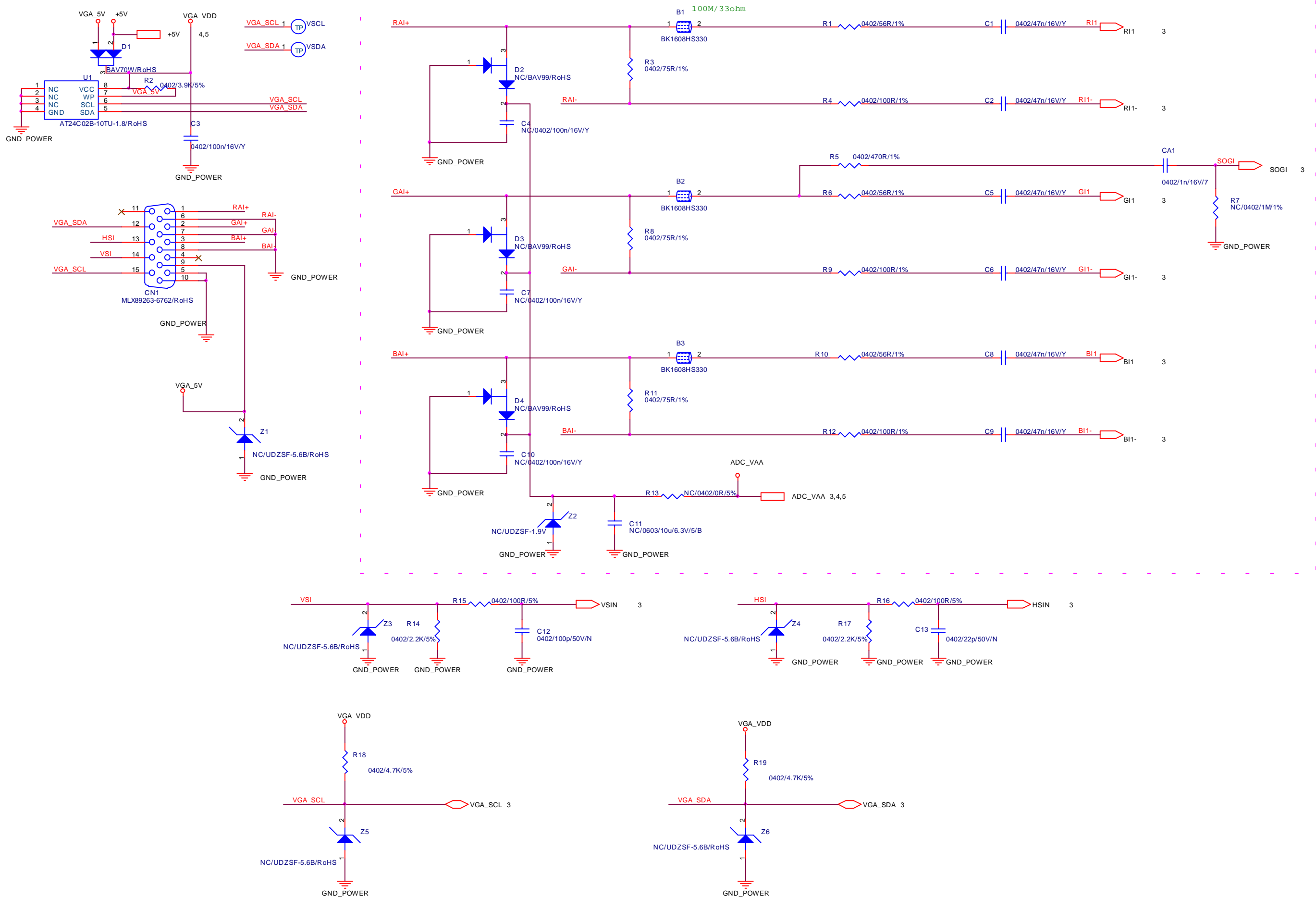
7. Block Diagram

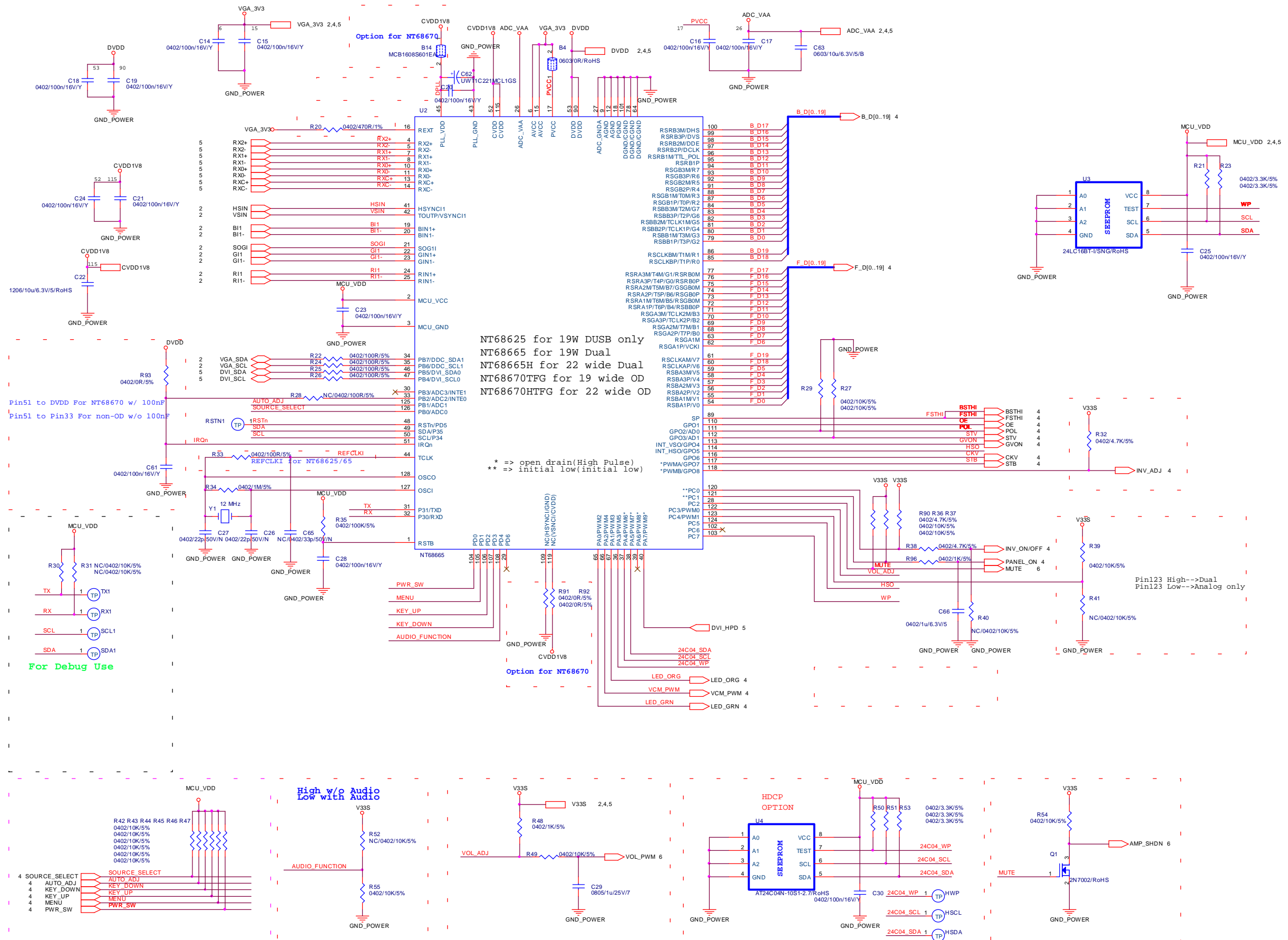


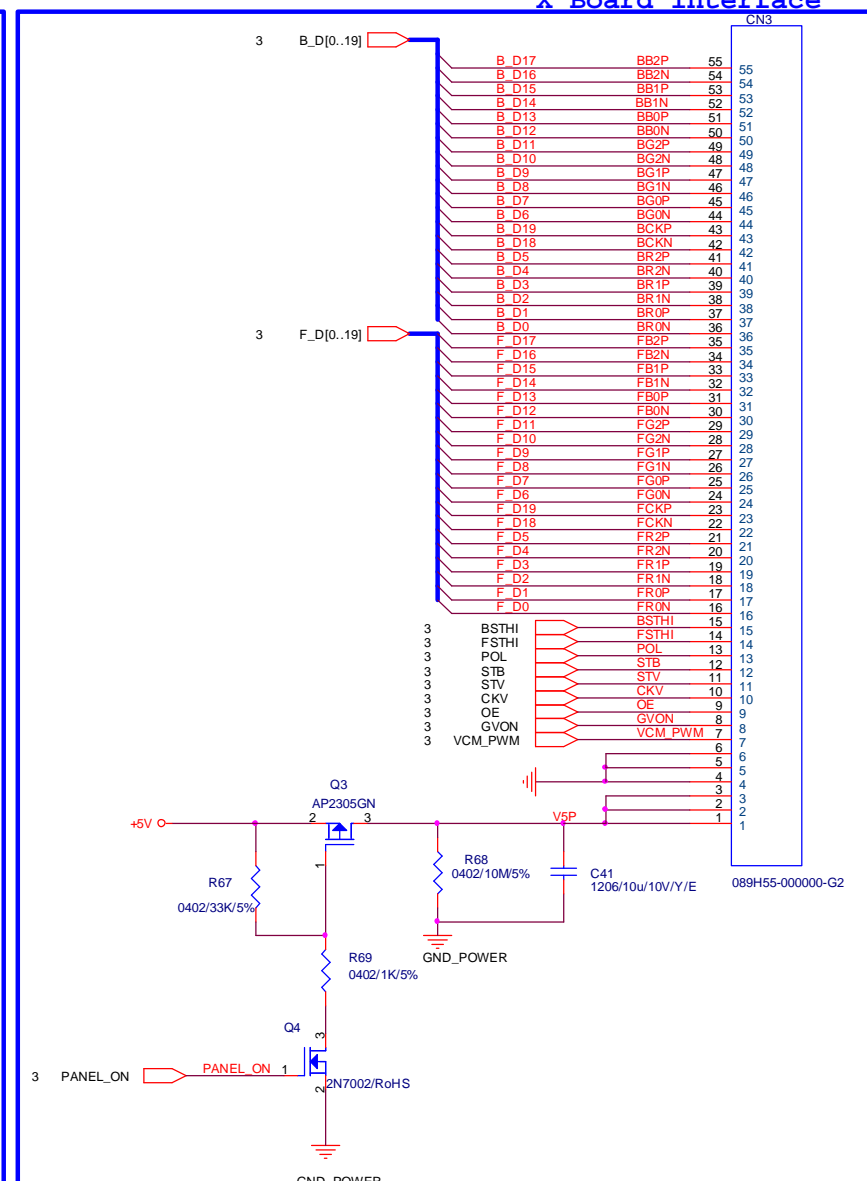
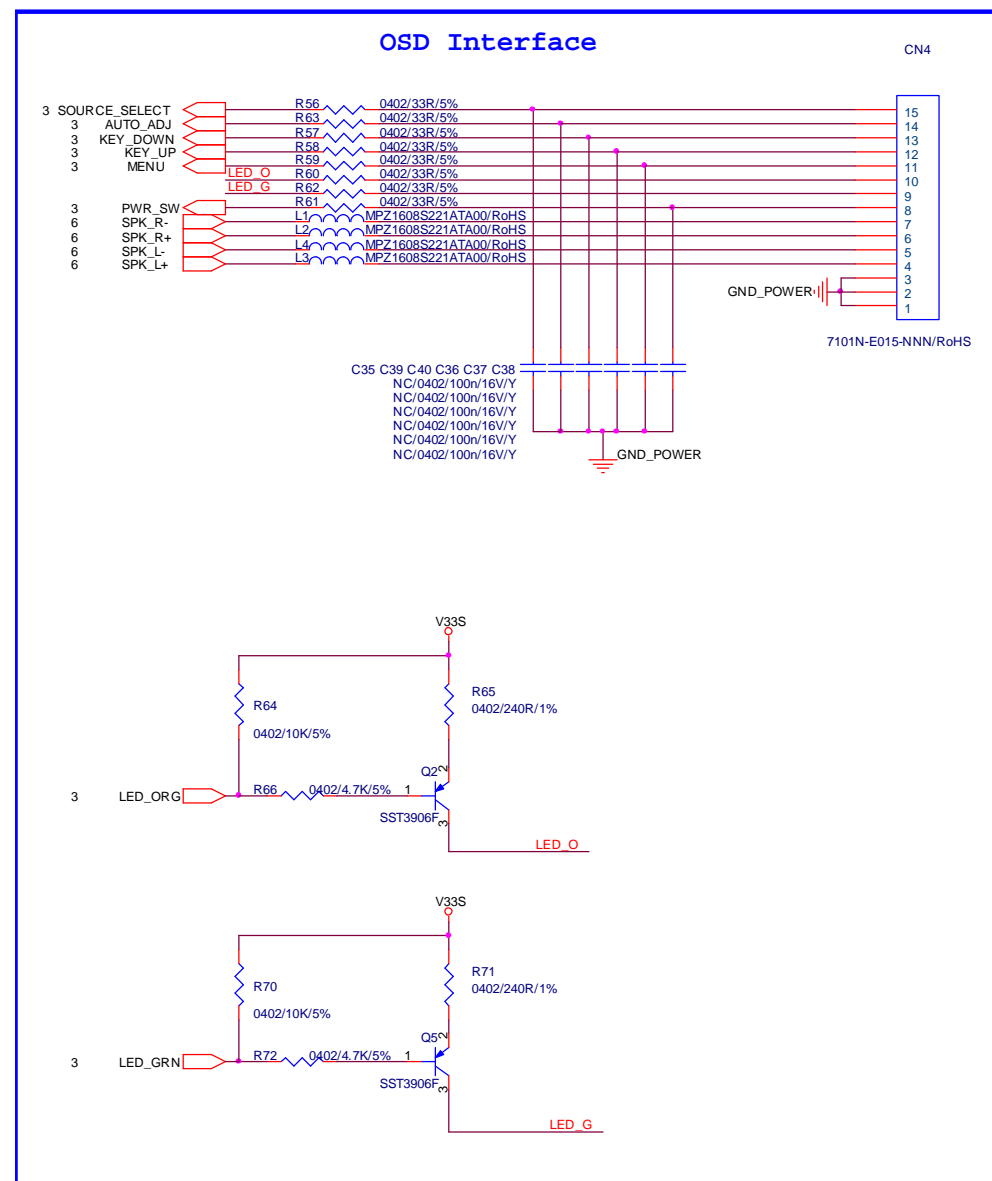
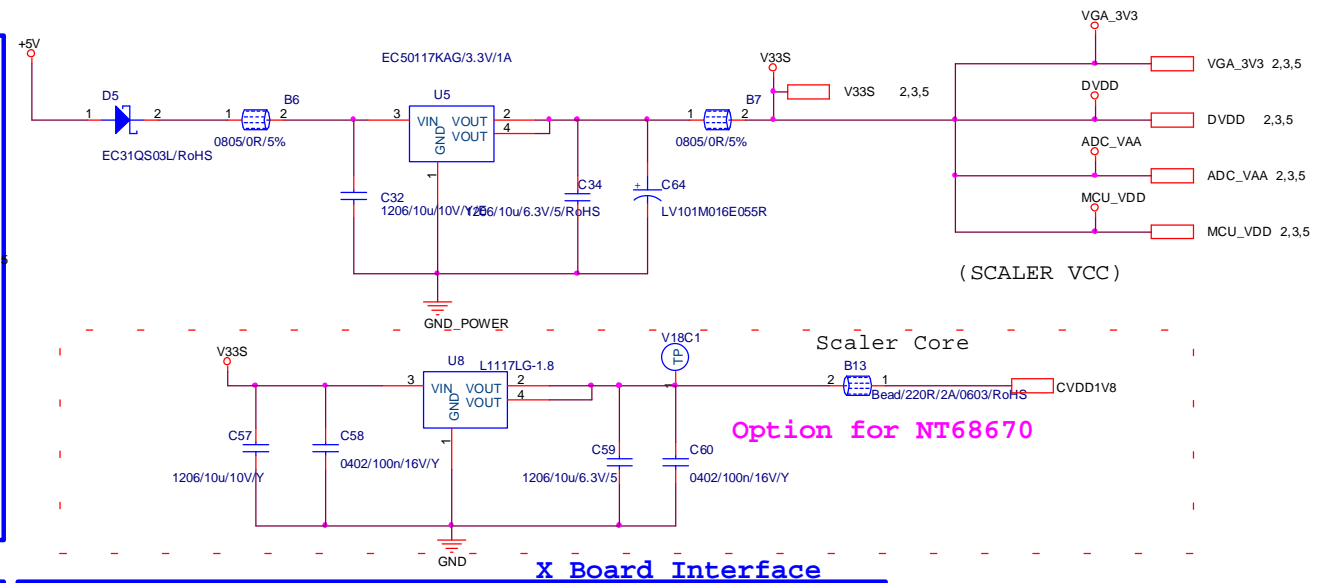
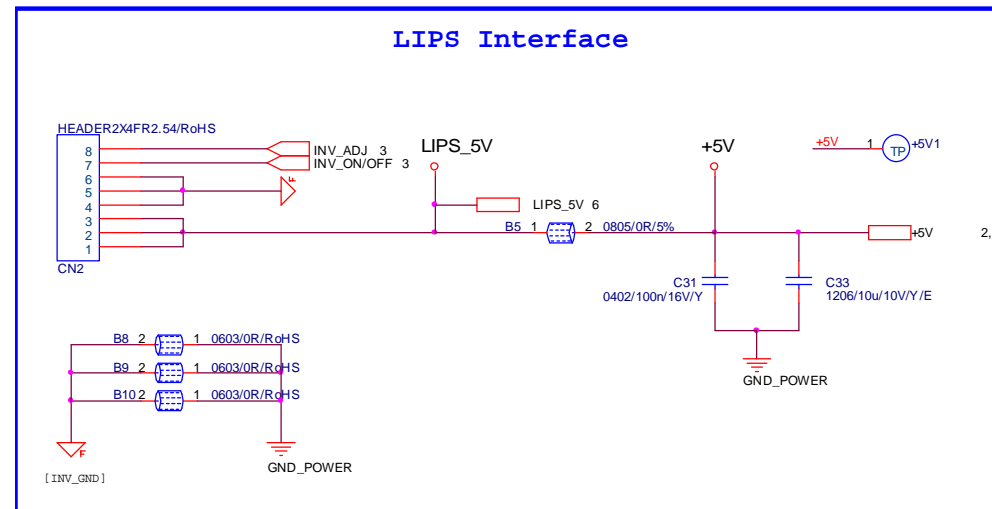
8. Schematic Diagrams
Main board
TOP



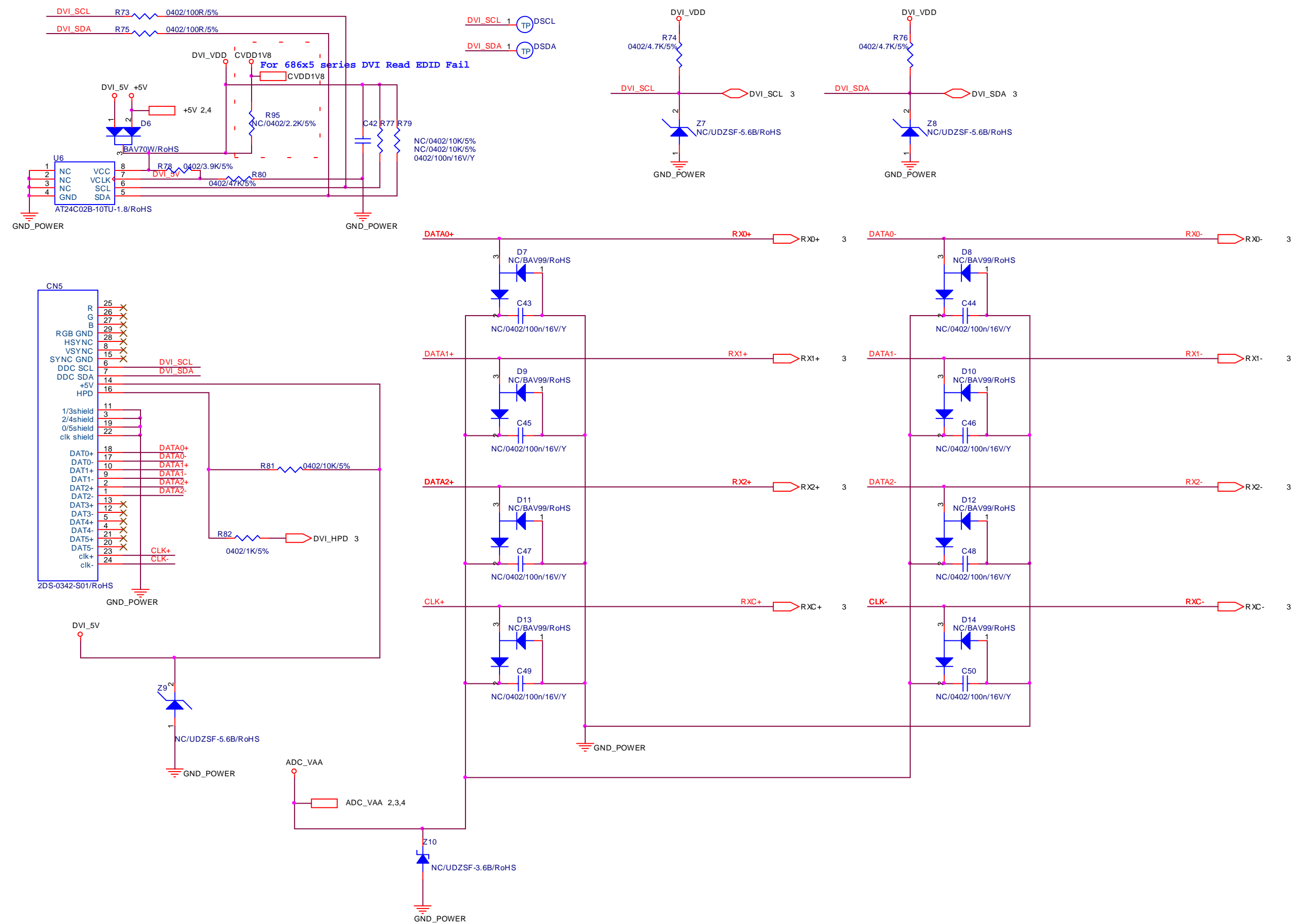
VGA



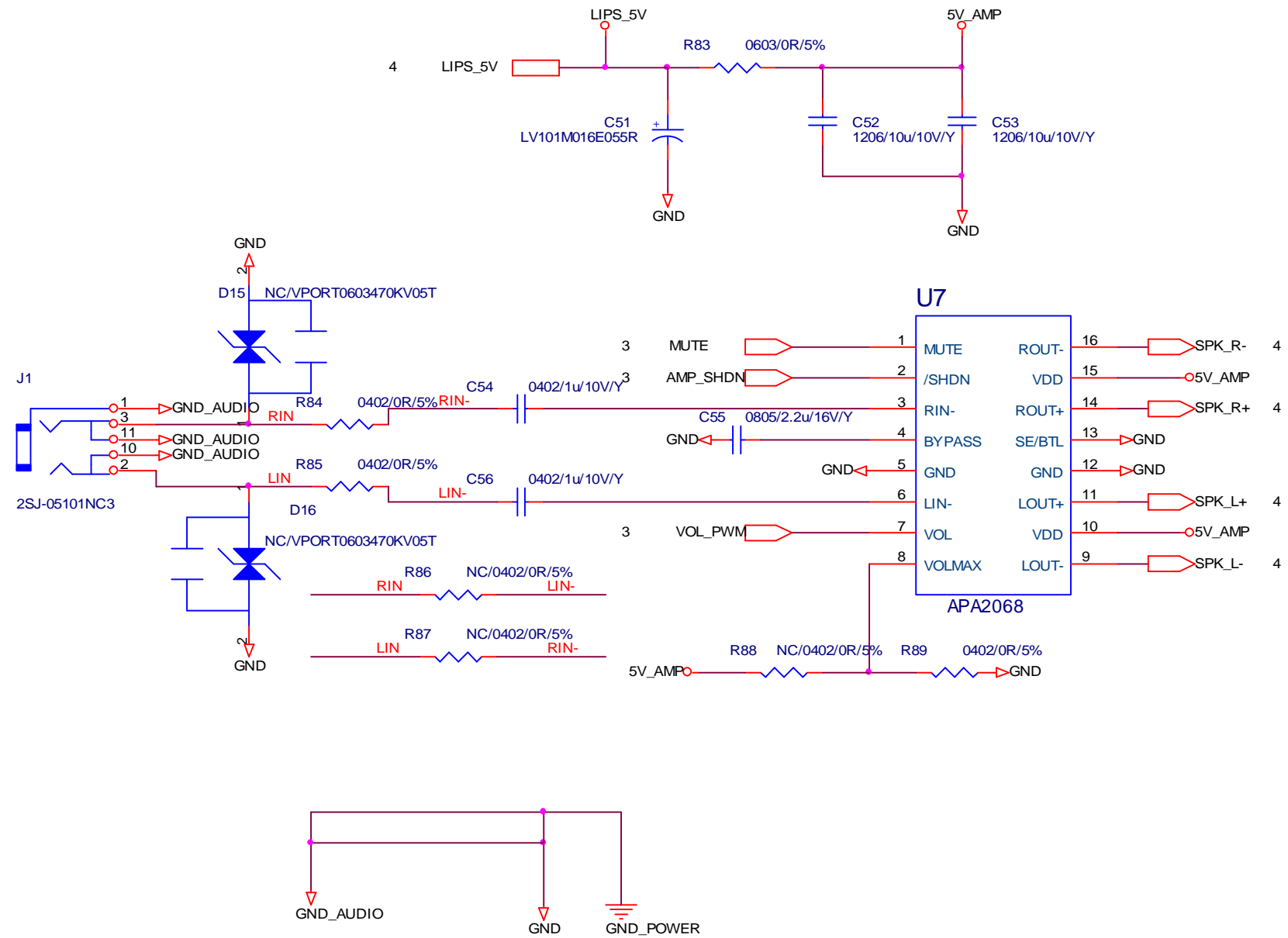
scaler

interface

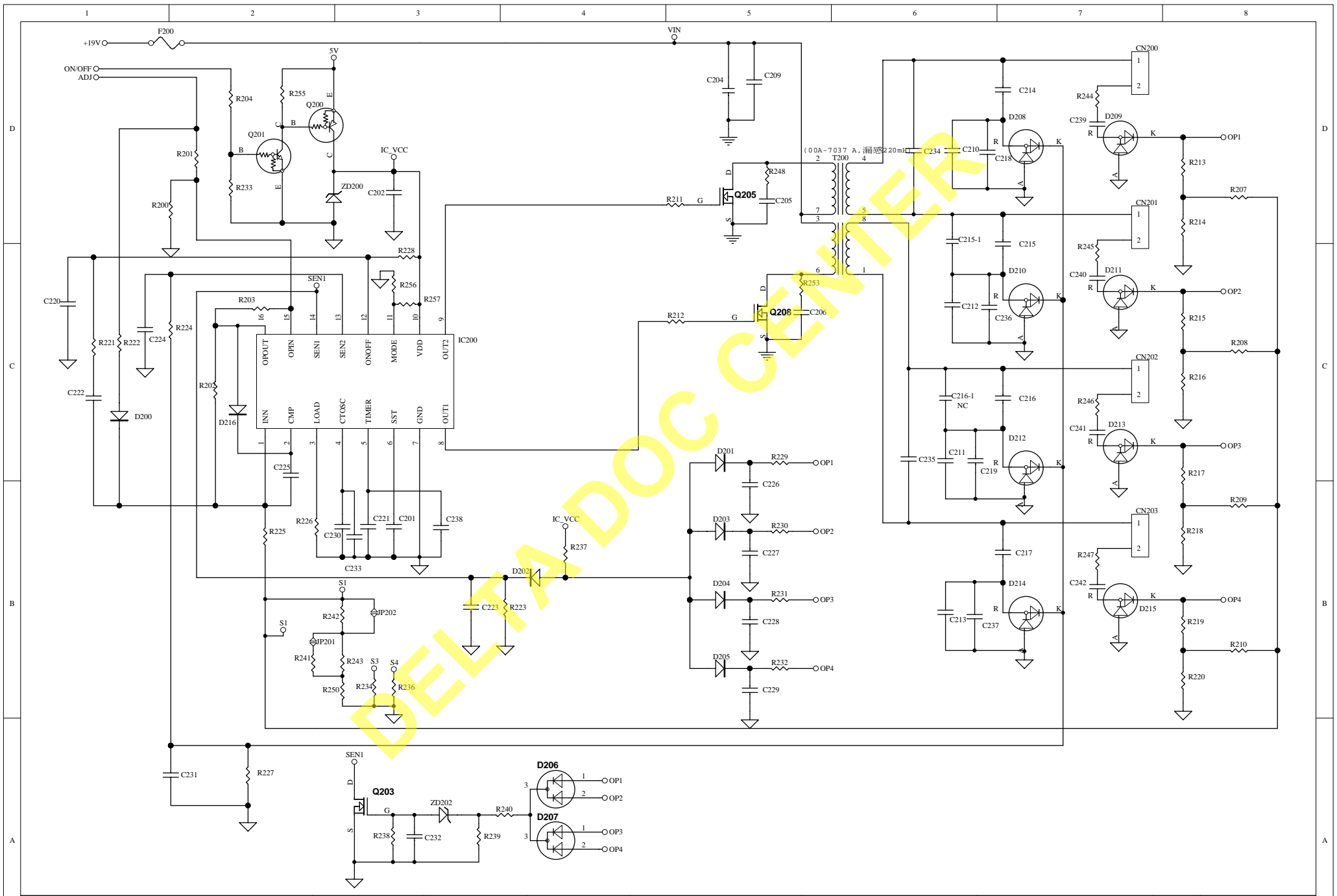
DVI



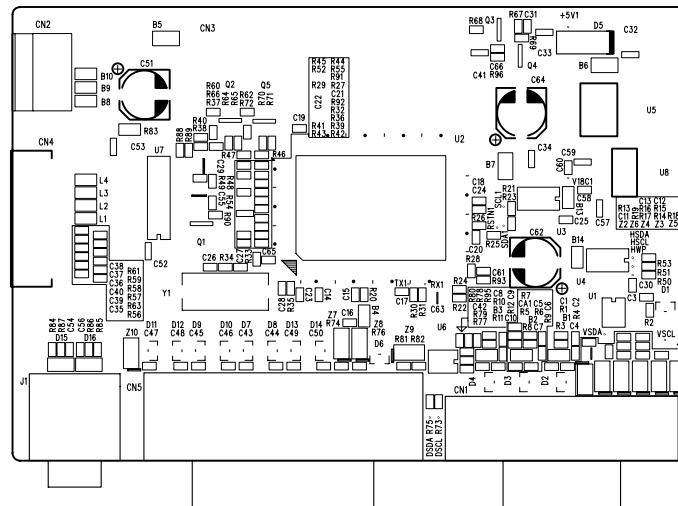
Audio



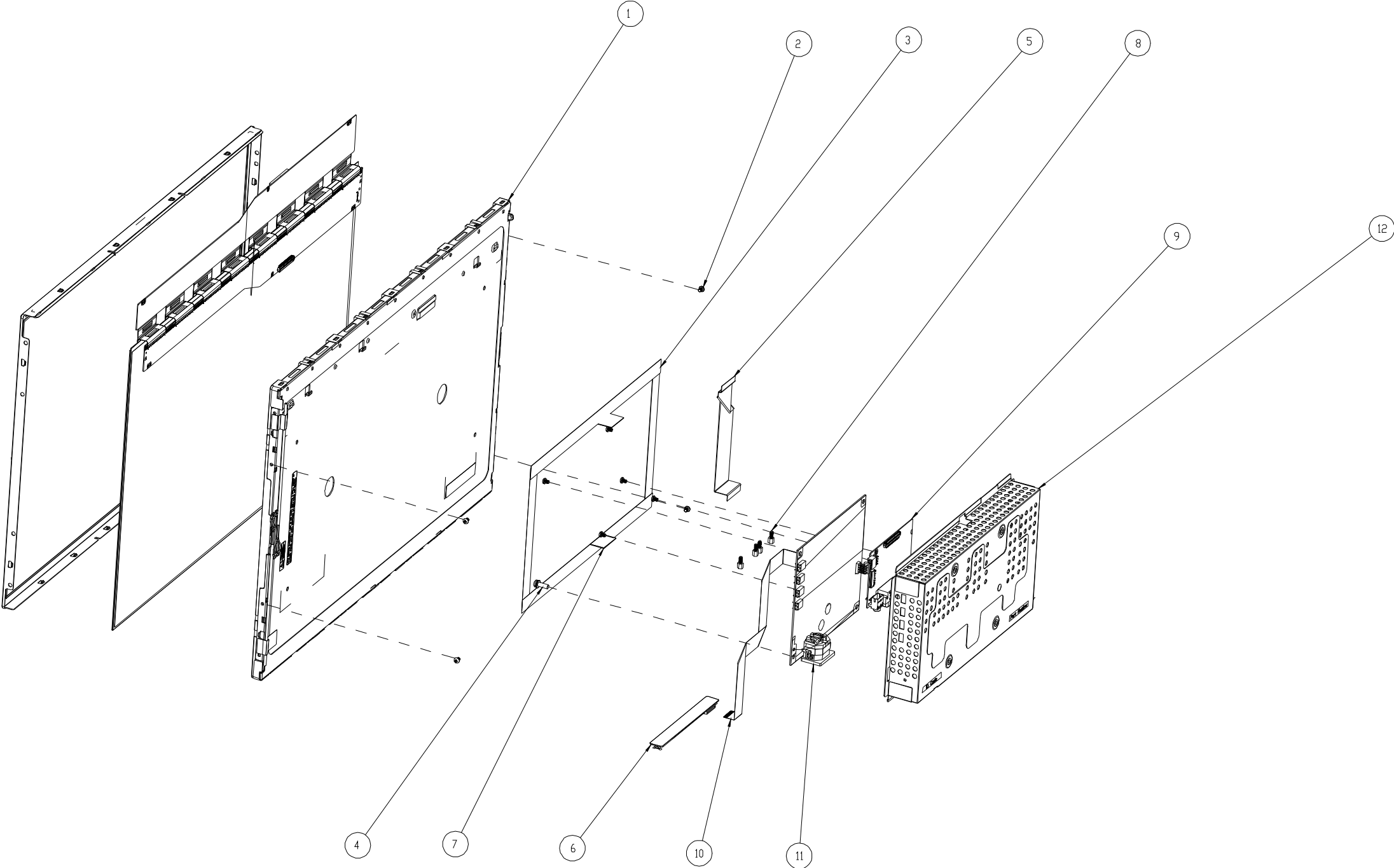
Power Board

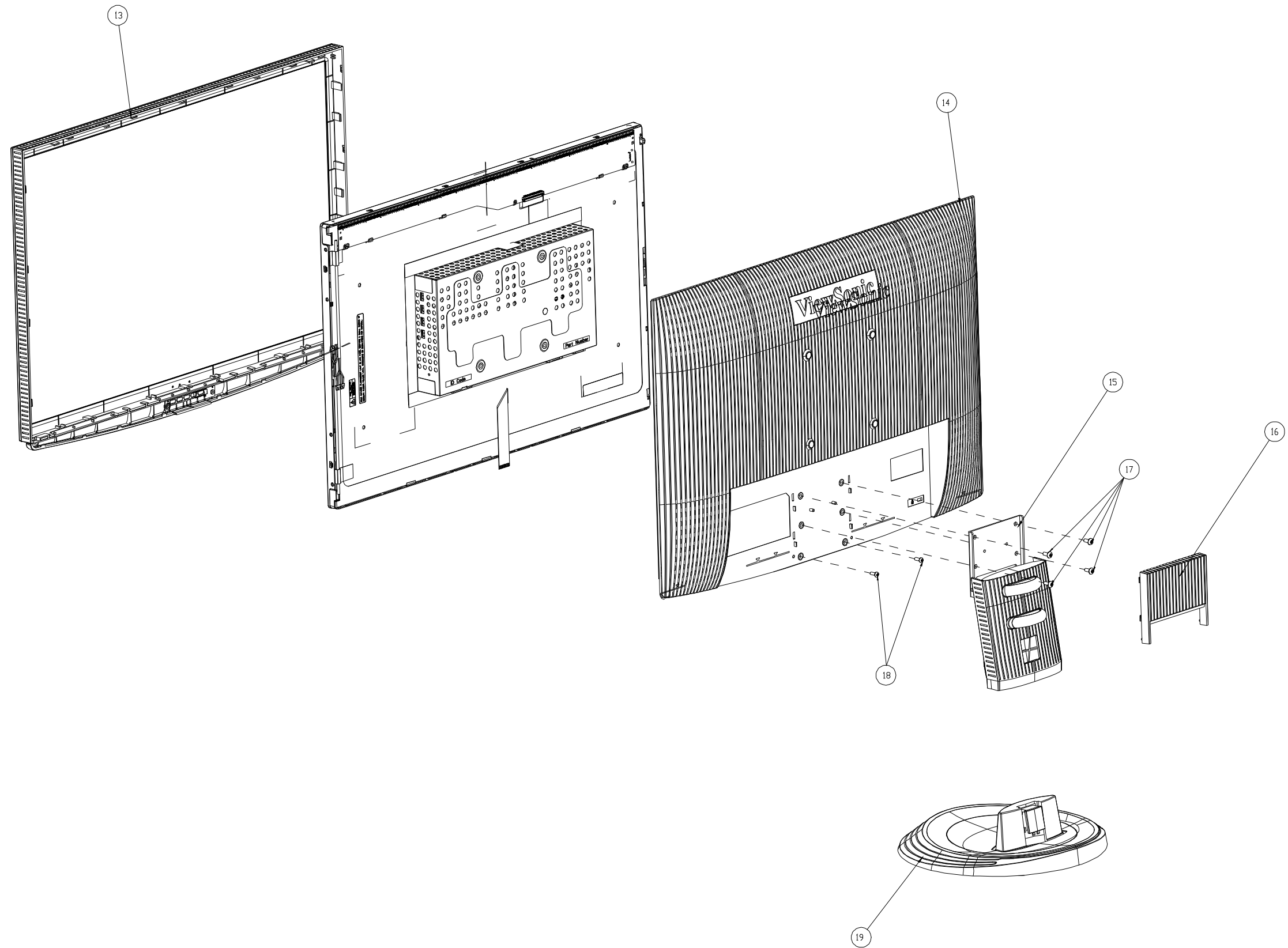


TSILK



10. Exploded Diagram and Exploded Parts List





TC6MNBHKNWVSN

ViewSonic Model Number: VX2240W-4

Rev:

Item	ViewSonic P/N	Ref. P/N	Description	Q'ty
1		750GLMC0KZ512C000Q	PANEL A220Z5 VSC CMO/SM0Z131D01	1
2		0M1G 330 4120	SCREW 42A9930008	4
3		N52G 1VSC010 HB	Conductive Tape 277mm *15mm *0.06mm (单 导)	2
4		N52G 1211001 HB	Conductive Tape 155mm *15mm *0.06mm(单 导)	2
5		089G176C 55N04	FFC Cable 55P 155MM/32-D019364	1
6		N52G 1VSC011	ISOLATED TAPE 73-D018291	1
7		0M1G1740 8120	SCREW FOR STD/MF 42-D020715/42-D000649	1
8		002G6008 2	SCREW 42-D015647	4
9		017G MBN1IUSIC000	MB 35-D019445/10-D024286/001071227_2	1
10		089G176C 15N17	FFC CABLE 15P 248.7mm/32-D021932	1
11		80GL22708DE	POWER BOARD/27-D018867	1
12		N85G0011 1 WQ	COVER AD 41-D022926	1
13		705GN734132 ZY	BEZEL ASSY 40-D021924	1
14		705GN734133 ZY	REAR ASSY 40-D021927	1
15		705GN734134 ZY	STAND ASS'Y 40-D021930	1
16		705GN734130 ZY	COVER HINGE ASS'Y40-D021919	1
17		0M1G1740 10120	SCREW 42A9940008	4
18		0Q1G 330 5120	SCREW 42-D003574	2
19		705GN734131 ZY	SEAT ASS'Y 40-D021922	1

11. Recommended Spare Parts List

TC6MNBBDTNVWN

Location	Part No.	Description	Remark
	705GN734132 ZY	BEZEL ASSY 40-D021924	
	N44GC010968 1B	CARTON- 78-D023666	
	N40G000196855A	CARTON LABEL	
	EDIDVSC22D001	CHECKSUM 0X09	
	EDIDVSC22A001	CHECKSUM 0XB4	
	N52G 1VSC006 HB	Conductive Tape 60mm *24mm *0.06mm	main source
	N52G 1211001	Conductive Tape 155mm *15mm *0.06mm	
	N52G 1211001 HB	Conductive Tape 155mm *15mm *0.06mm	main source
	N52G 1VSC010 HB	Conductive Tape 277mm *15mm *0.06mm	main source
	N52G 1VSC010	Conductive Tape 277mm *15mm *0.06mm	
	N52G 1VSC006	Conductive Tape 60mm *24mm *0.06mm	
	N44G9003185	CORNER PAPER 7841595111/78-D004862	
	N44G9003 80	CORNER PAPER 78-D004868	
	N85G0011 1 WQ	COVER AD 41-D022926	
	705GN734130 ZY	COVER HINGE ASS'Y40-D021919	
	N44GC010 1 MZ	CUSHION LEFT 78-D022378	
	N44GC010 2 MZ	CUSHION RIGHT 78-D022387	
	089G 728HAA DB	D-SUB CABLE	
	089G1738SAA600	D-SUB CABLE 1800mm 32-D002132	
	089G1738JAA 23	D-SUB CABLE 1800mm 32F3018003	
	089G 728CAAN00	D-SUB CANBLE 1800MM 32-D002132	main source
	089G1748HAA AC	DVI CABLE	
	089G1748JAA600	DVI Cable 1800mm / 32F0000004	
	089G1748SAAA01	DVI CORD 32-D013540	
	089G176C 15N17	FFC CABLE 15P 248.7mm/32-D021932	
	089G176C 55N04	FFC Cable 55P 155MM/32-D019364	main source
	089G176J 55N01	FFC CABLE 55P 155MM/32-D019364	
	N52G 1VSC011	ISOLATED TAPE 73-D018291	
	KEPC7NC3	KEY BOARD/35-D023591	
	N41G220296832A	MANUAL 76-D022380	
	017G MBN1IUSIC000	MB 35-D019445/10-D024286/001071227_2	
	N07G0006 1 HW	PALLET- 78-D020542	
	750GLMC0KZ512C000Q	PANEL A220Z5 VSC CMO/SM0Z131D01	
	N52G6020001 HB	panel protector film	
	N45G 88607004 HQ	PE BAG FOR SKD 78-D019961	
	N45G 52001	PE SHEET	
	N40G000296824A	POP LABEL- 77-D022273	

	80GL22708DE	POWER BOARD/27-D018867	main source
	80GL22700YY	POWER BOARD/27-D018868	
	089G412A18NISC	POWER CORD 32E1818058	
	089G415A18NISC	POWER CORD I-SHENG(KR&EU)/32-D022217	
	089G404A18N YH	POWER CORD(32E1818018/32-D022217)	main source
	089G421A18N IS	POWER CORD/32-D022217	
	089G412A18NIS3	POWER CORD/32E1818058	main source
	705GN734133 ZY	REAR ASSY 40-D021927	
	N40G0001968 2A	S/N LABEL 7741513161	
	N40G000196831A	S/N LABEL- 77-D022381	
	N40G 22N96821C	SAFETY LABEL	
	002G6008 2	SCREW 42-D015647	
	0M1G 330 4120	SCREW 42A9930008	
	0M1G1740 10120	SCREW 42A9940008	
	0Q1G 330 5120	SCREW 42-D003574	
	0M1G1740 8120	SCREW FOR STD/MF 42-D020715/42-D000649	
	705GN734131 ZY	SEAT ASS'Y 40-D021922	
	N52G 1VSC002 HY	Security Tape- 7345511002	
	N44GC010VSC 1A	Shipping Draw- 79-D022372	
	089G1748CAA AC	SIGNAL CABLE DVI COMLINK	main source
	705GN734134 ZY	STAND ASS'Y 40-D021930	
	N52G 2191 01	TAPE /7345911004	
	050G 600 1 W	WHITE STRAP	
	095G8014 2N00	WIRE HARNESS 2P-2P 20MM/32-D016783	
	095G8014 2N01	WIRE HARNESS 2P-2P 40MM/32-D015712	
	P45G 77001	enlace film	

TC6MNBBDTNWVWNND

Location	Part No.	Description	Remark
	705GN734132 ZY	BEZEL ASSY 40-D021924	
	N44GC010968 1B	CARTON- 78-D023666	
	N40G000196855A	CARTON LABEL	
	EDIDVSC22D001	CHECKSUM 0X09	
	EDIDVSC22A001	CHECKSUM 0XB4	
	N52G 1VSC006 HB	Conductive Tape 60mm *24mm *0.06mm	main source
	N52G 1211001	Conductive Tape 155mm *15mm *0.06mm	
	N52G 1211001 HB	Conductive Tape 155mm *15mm *0.06mm	main source
	N52G 1VSC010 HB	Conductive Tape 277mm *15mm *0.06mm	main source
	N52G 1VSC010	Conductive Tape 277mm *15mm *0.06mm	

	N52G 1VSC006	Conductive Tape 60mm *24mm *0.06mm	
	N44G9003185	CORNER PAPER 7841595111/78-D004862	
	N44G9003 80	CORNER PAPER 78-D004868	
	N85G0011 1 WQ	COVER AD 41-D022926	
	705GN734130 ZY	COVER HINGE ASS'Y40-D021919	
	N44GC010 1 MZ	CUSHION LEFT 78-D022378	
	N44GC010 2 MZ	CUSHION RIGHT 78-D022387	
	089G1738SAA600	D-SUB CABLE 1800mm 32-D002132	
	089G1738JAA 23	D-SUB CABLE 1800mm 32F3018003	
	089G 728CAAN00	D-SUB CANBLE 1800MM 32-D002132	main source
	089G1748HAA AC	DVI CABLE	main source
	089G1748JAA600	DVI Cable 1800mm / 32F0000004	
	089G1748SAAA01	DVI CORD 32-D013540	
	089G176C 15N17	FFC CABLE 15P 248.7mm/32-D021932	
	089G176C 55N04	FFC Cable 55P 155MM/32-D019364	
	N52G 1VSC011	ISOLATED TAPE 73-D018291	
	KEPC7NC1	KEY BOARD/35-D021770	
	KEPC7NC3	KEY BOARD/35-D023591	main source
	N41G220296832A	MANUAL 76-D022380	
	017G MBN1IUSIC000	MB 35-D019445/10-D024286/001071227_2	
	N07G0006 1 HW	PALLET- 78-D020542	
	750GLMC0KZ512C000Q	PANEL A220Z5 VSC CMO/SM0Z131D01	
	N52G6020001 HB	panel protector film	
	N45G 88607004 HQ	PE BAG FOR SKD 78-D019961	
	N45G 52001	PE SHEET	
	N40G000296824A	POP LABEL- 77-D022273	
	80GL22708DE	POWER BOARD/27-D018867	main source
	80GL22700YY	POWER BOARD/27-D018868	
	089G412A18NISC	POWER CORD 32E1818058	
	089G415A18NISC	POWER CORD I-SHENG(KR&EU)/32-D022217	
	089G404A18N YH	POWER CORD(32E1818018/32-D022217)	main source
	089G421A18N IS	POWER CORD/32-D022217	
	089G412A18NIS3	POWER CORD/32E1818058	main source
	705GN734133 ZY	REAR ASSY 40-D021927	
	N40G0001968 2A	S/N LABEL 7741513161	
	N40G000196831A	S/N LABEL- 77-D022381	
	F40G 22N96821B	SAFETY LABEL	
	002G6008 2	SCREW 42-D015647	
	0M1G 330 4120	SCREW 42A9930008	

	0M1G1740 10120	SCREW 42A9940008	
	0Q1G 330 5120	SCREW 42-D003574	
	0M1G1740 8120	SCREW FOR STD/MF 42-D020715/42-D000649	
	705GN734131 ZY	SEAT ASS'Y 40-D021922	
	N52G 1VSC002 HY	Security Tape- 7345511002	
	N44GC010VSC 1A	Shipping Draw- 79-D022372	
	705GN734134 ZY	STAND ASS'Y 40-D021930	
	N52G 2191 01	TAPE /7345911004	
	050G 600 1 W	WHITE STRAP	
	095G8014 2N00	WIRE HARNESS 2P-2P 20MM/32-D016783	
	095G8014 2N01	WIRE HARNESS 2P-2P 40MM/32-D015712	
	P45G 77001	enlace film	

TC6MNBHKNWVSN

Location	Part No.	Description	Remark
	705GN734132 ZY	BEZEL ASSY 40-D021924	
	N44GC010968 1B	CARTON- 78-D023666	
	N40G000196855A	CARTON LABEL	
	EDIDVSC22D001	CHECKSUM 0X09	
	EDIDVSC22A001	CHECKSUM 0XB4	
	N52G 1VSC006 HB	Conductive Tape 60mm *24mm *0.06mm	main source
	N52G 1211001	Conductive Tape 155mm *15mm *0.06mm	
	N52G 1211001 HB	Conductive Tape 155mm *15mm *0.06mm	main source
	N52G 1VSC010 HB	Conductive Tape 277mm *15mm *0.06mm	main source
	N52G 1VSC010	Conductive Tape 277mm *15mm *0.06mm	
	N52G 1VSC006	Conductive Tape 60mm *24mm *0.06mm	
	N44G9003185	CORNER PAPER 7841595111/78-D004862	
	N44G9003 80	CORNER PAPER 78-D004868	
	N85G0011 1 WQ	COVER AD 41-D022926	
	705GN734130 ZY	COVER HINGE ASS'Y40-D021919	
	N44GC010 1 MZ	CUSHION LEFT 78-D022378	
	N44GC010 2 MZ	CUSHION RIGHT 78-D022387	
	089G 728HAA DB	D-SUB CABLE	
	089G1738SAA600	D-SUB CABLE 1800mm 32-D002132	
	089G1738JAA 23	D-SUB CABLE 1800mm 32F3018003	
	089G 728CAAN00	D-SUB CANBLE 1800MM 32-D002132	main source
	089G1748HAA AC	DVI CABLE	
	089G1748JAA600	DVI Cable 1800mm / 32F0000004	
	089G1748SAAA01	DVI CORD 32-D013540	
	089G176C 15N17	FFC CABLE 15P 248.7mm/32-D021932	

	089G176C 55N04	FFC Cable 55P 155MM/32-D019364	main source
	089G176J 55N01	FFC CABLE 55P 155MM/32-D019364	
	N52G 1VSC011	ISOLATED TAPE 73-D018291	
	KEPC7NC3	KEY BOARD/35-D023591	
	N41G220296821A	MANUAL 76-D022374	
	017G MBN1IUSIC000	MB 35-D019445/10-D024286/001071227_2	
	N07G0006 1 HW	PALLET- 78-D020542	
	750GLMC0KZ512C000Q	PANEL A220Z5 VSC CMO/SM0Z131D01	
	N52G6020001 HB	panel protector film	
	N45G 88607004 HQ	PE BAG FOR SKD 78-D019961	
	N45G 52001	PE SHEET	
	N40G000296824A	POP LABEL- 77-D022273	
	80GL22708DE	POWER BOARD/27-D018867	main source
	80GL22700YY	POWER BOARD/27-D018868	
	089G402A18N YH	POWER CORD(32-D022438)	
	089G402A18N IS	POWER CORD/(TPV 共用)32-D022438	main source
	089G402A18NISC	POWER CORD/32-D022438	
	705GN734133 ZY	REAR ASSY 40-D021927	
	N40G0001968 2A	S/N LABEL 7741513161	
	N40G000196831A	S/N LABEL- 77-D022381	
	N40G 22N96821C	SAFETY LABEL	
	002G6008 2	SCREW 42-D015647	
	0M1G 330 4120	SCREW 42A9930008	
	0M1G1740 10120	SCREW 42A9940008	
	0Q1G 330 5120	SCREW 42-D003574	
	0M1G1740 8120	SCREW FOR STD/MF 42-D020715/42-D000649	
	705GN734131 ZY	SEAT ASS'Y 40-D021922	
	N52G 1VSC002 HY	Security Tape- 7345511002	
	N44GC010VSC 1A	Shipping Draw- 79-D022372	
	089G1748CAA AC	SIGNAL CABLE DVI COMLINK	main source
	705GN734134 ZY	STAND ASS'Y 40-D021930	
	N52G 2191 01	TAPE /7345911004	
	050G 600 1 W	WHITE STRAP	
	095G8014 2N00	WIRE HARNESS 2P-2P 20MM/32-D016783	
	095G8014 2N01	WIRE HARNESS 2P-2P 40MM/32-D015712	
	P45G 77001	enlace film	

TC6MNBHKNWVSND

Location	Part No.	Description	Remark
	705GN734132 ZY	BEZEL ASSY 40-D021924	

	N44GC010968 1B	CARTON- 78-D023666	
	N40G000196855A	CARTON LABEL	
	EDIDVSC22D001	CHECKSUM 0X09	
	EDIDVSC22A001	CHECKSUM 0XB4	
	N52G 1VSC006 HB	Conductive Tape 60mm *24mm *0.06mm	main source
	N52G 1211001	Conductive Tape 155mm *15mm *0.06mm	
	N52G 1211001 HB	Conductive Tape 155mm *15mm *0.06mm	main source
	N52G 1VSC010 HB	Conductive Tape 277mm *15mm *0.06mm	main source
	N52G 1VSC010	Conductive Tape 277mm *15mm *0.06mm	
	N52G 1VSC006	Conductive Tape 60mm *24mm *0.06mm	
	N44G9003185	CORNER PAPER 7841595111/78-D004862	
	N44G9003 80	CORNER PAPER 78-D004868	
	N85G0011 1 WQ	COVER AD 41-D022926	
	705GN734130 ZY	COVER HINGE ASS'Y40-D021919	
	N44GC010 1 MZ	CUSHION LEFT 78-D022378	
	N44GC010 2 MZ	CUSHION RIGHT 78-D022387	
	089G1738SAA600	D-SUB CABLE 1800mm 32-D002132	
	089G1738JAA 23	D-SUB CABLE 1800mm 32F3018003	
	089G 728CAAN00	D-SUB CANBLE 1800MM 32-D002132	main source
	089G1748HAA AC	DVI CABLE	main source
	089G1748JAA600	DVI Cable 1800mm / 32F0000004	
	089G1748SAAA01	DVI CORD 32-D013540	
	089G176C 15N17	FFC CABLE 15P 248.7mm/32-D021932	
	089G176C 55N04	FFC Cable 55P 155MM/32-D019364	
	N52G 1VSC011	ISOLATED TAPE 73-D018291	
	KEPC7NC1	KEY BOARD/35-D021770	
	KEPC7NC3	KEY BOARD/35-D023591	main source
	N41G220296821A	MANUAL 76-D022374	
	017G MBN1IUSIC000	MB 35-D019445/10-D024286/001071227_2	
	N07G0006 1 HW	PALLET- 78-D020542	
	750GLMC0KZ512C000Q	PANEL A220Z5 VSC CMO/SM0Z131D01	
	N52G6020001 HB	panel protector film	
	N45G 88607004 HQ	PE BAG FOR SKD 78-D019961	
	N45G 52001	PE SHEET	
	N40G000296824A	POP LABEL- 77-D022273	

	80GL22708DE	POWER BOARD/27-D018867	main source
	80GL22700YY	POWER BOARD/27-D018868	
	089G402A18N YH	POWER CORD(32-D022438)	
	089G402A18N IS	POWER CORD/(TPV 共用)32-D022438	main source
	089G402A18NISC	POWER CORD/32-D022438	
	705GN734133 ZY	REAR ASSY 40-D021927	
	N40G0001968 2A	S/N LABEL 7741513161	
	N40G000196831A	S/N LABEL- 77-D022381	
	F40G 22N96821B	SAFETY LABEL	
	002G6008 2	SCREW 42-D015647	
	0M1G 330 4120	SCREW 42A9930008	
	0M1G1740 10120	SCREW 42A9940008	
	0Q1G 330 5120	SCREW 42-D003574	
	0M1G1740 8120	SCREW FOR STD/MF 42-D020715/42-D000649	
	705GN734131 ZY	SEAT ASS'Y 40-D021922	
	N52G 1VSC002 HY	Security Tape- 7345511002	
	N44GC010VSC 1A	Shipping Draw- 79-D022372	
	705GN734134 ZY	STAND ASS'Y 40-D021930	
	N52G 2191 01	TAPE /7345911004	
	050G 600 1 W	WHITE STRAP	
	095G8014 2N00	WIRE HARNESS 2P-2P 20MM/32-D016783	
	095G8014 2N01	WIRE HARNESS 2P-2P 40MM/32-D015712	
	P45G 77001	enlace film	

TC6MNBDDNWVSNNN

Location	Part No.	Description	Remark
	705GN734132 ZY	BEZEL ASSY 40-D021924	
	N44GC010968 1B	CARTON- 78-D023666	
	N40G000196855A	CARTON LABEL	
	EDIDVSC22D001	CHECKSUM 0X09	
	EDIDVSC22A001	CHECKSUM 0XB4	
	N52G 1VSC006 HB	Conductive Tape 60mm *24mm *0.06mm	main source
	N52G 1211001	Conductive Tape 155mm *15mm *0.06mm	
	N52G 1211001 HB	Conductive Tape 155mm *15mm *0.06mm	main source
	N52G 1VSC010 HB	Conductive Tape 277mm *15mm *0.06mm	main source
	N52G 1VSC010	Conductive Tape 277mm *15mm *0.06mm	
	N52G 1VSC006	Conductive Tape 60mm *24mm *0.06mm	
	N44G9003185	CORNER PAPER 7841595111/78-D004862	

	N44G9003 80	CORNER PAPER 78-D004868	
	N85G0011 1 WQ	COVER AD 41-D022926	
	705GN734130 ZY	COVER HINGE ASS'Y40-D021919	
	N44GC010 1 MZ	CUSHION LEFT 78-D022378	
	N44GC010 2 MZ	CUSHION RIGHT 78-D022387	
	N40G000296811C ZA	Customer label on Carton	
	089G 728HAA DB	D-SUB CABLE	
	089G1738SAA600	D-SUB CABLE 1800mm 32-D002132	
	089G1738JAA 23	D-SUB CABLE 1800mm 32F3018003	
	089G 728CAAN00	D-SUB CANBLE 1800MM 32-D002132	main source
	089G1748HAA AC	DVI CABLE	
	089G1748JAA600	DVI Cable 1800mm / 32F0000004	
	089G1748SAAA01	DVI CORD 32-D013540	
	089G176C 15N17	FFC CABLE 15P 248.7mm/32-D021932	
	089G176C 55N04	FFC Cable 55P 155MM/32-D019364	main source
	089G176J 55N01	FFC CABLE 55P 155MM/32-D019364	
	N52G 1VSC011	ISOLATED TAPE 73-D018291	
	KEPC7NC3	KEY BOARD/35-D023591	
	N41G220296832A	MANUAL 76-D022380	
	017G MBN1IUSIC000	MB 35-D019445/10-D024286/001071227_2	
	N07G0006 1 HW	PALLET- 78-D020542	
	750GLMC0KZ512C000Q	PANEL A220Z5 VSC CMO/SM0Z131D01	
	N52G6020001 HB	panel protector film	
	N45G 88607004 HQ	PE BAG FOR SKD 78-D019961	
	N45G 52001	PE SHEET	
	N40G000296824A	POP LABEL- 77-D022273	
	80GL22708DE	POWER BOARD/27-D018867	main source
	80GL22700YY	POWER BOARD/27-D018868	
	089G414A18NIS6	POWER CORD 32E1818021	
	089G414A18NISC	POWER CORD 32E1818021	
	089G414A18N YH	POWER CORD(32E1818021)	main source
	N40G000296813B ZA	QC PASS LABEL	
	705GN734133 ZY	REAR ASSY 40-D021927	
	N40G0001968 2A	S/N LABEL 7741513161	
	N40G000196858A	S/N LABEL- 77-D022383	
	N40G 22N96821C	SAFETY LABEL	
	002G6008 2	SCREW 42-D015647	
	0M1G 330 4120	SCREW 42A9930008	
	0M1G1740 10120	SCREW 42A9940008	
	0Q1G 330 5120	SCREW 42-D003574	

	0M1G1740 8120	SCREW FOR STD/MF 42-D020715/42-D000649	
	705GN734131 ZY	SEAT ASS'Y 40-D021922	
	N52G 1VSC002 HY	Security Tape- 7345511002	
	N44GC010VSC 1A	Shipping Draw- 79-D022372	
	089G1748CAA AC	SIGNAL CABLE DVI COMLINK	main source
	705GN734134 ZY	STAND ASS'Y 40-D021930	
	N40G000296822B ZA	Supplier label	
	N52G 2191 01	TAPE /7345911004	
	N41G780P968 1A	WARRANTY CARD- 78-D021250	
	050G 600 1 W	WHITE STRAP	
	095G8014 2N00	WIRE HARNESS 2P-2P 20MM/32-D016783	
	095G8014 2N01	WIRE HARNESS 2P-2P 40MM/32-D015712	
	P45G 77001	enlace film	

TC6MNBDDNWVSNNND

Location	Part No.	Description	Remark
	705GN734132 ZY	BEZEL ASSY 40-D021924	
	N44GC010968 1B	CARTON- 78-D023666	
	N40G000196855A	CARTON LABEL	
	EDIDVSC22D001	CHECKSUM 0X09	
	EDIDVSC22A001	CHECKSUM 0XB4	
	N52G 1VSC006 HB	Conductive Tape 60mm *24mm *0.06mm	main source
	N52G 1211001	Conductive Tape 155mm *15mm *0.06mm	
	N52G 1211001 HB	Conductive Tape 155mm *15mm *0.06mm	main source
	N52G 1VSC010 HB	Conductive Tape 277mm *15mm *0.06mm	main source
	N52G 1VSC010	Conductive Tape 277mm *15mm *0.06mm	
	N52G 1VSC006	Conductive Tape 60mm *24mm *0.06mm	
	N44G9003185	CORNER PAPER 7841595111/78-D004862	
	N44G9003 80	CORNER PAPER 78-D004868	
	N85G0011 1 WQ	COVER AD 41-D022926	
	705GN734130 ZY	COVER HINGE ASS'Y40-D021919	
	N44GC010 1 MZ	CUSHION LEFT 78-D022378	
	N44GC010 2 MZ	CUSHION RIGHT 78-D022387	
	N40G000296811C ZA	Customer label on Carton	
	089G1738SAA600	D-SUB CABLE 1800mm 32-D002132	
	089G1738JAA 23	D-SUB CABLE 1800mm 32F3018003	
	089G 728CAAN00	D-SUB CANBLE 1800MM 32-D002132	main source

	089G1748HAA AC	DVI CABLE	main source
	089G1748JAA600	DVI Cable 1800mm / 32F0000004	
	089G1748SAAA01	DVI CORD 32-D013540	
	089G176C 15N17	FFC CABLE 15P 248.7mm/32-D021932	
	089G176C 55N04	FFC Cable 55P 155MM/32-D019364	
	N52G 1VSC011	ISOLATED TAPE 73-D018291	
	KEPC7NC1	KEY BOARD/35-D021770	
	KEPC7NC3	KEY BOARD/35-D023591	main source
	N41G220296832A	MANUAL 76-D022380	
	017G MBN1IUSIC000	MB 35-D019445/10-D024286/001071227_2	
	N07G0006 1 HW	PALLET- 78-D020542	
	750GLMC0KZ512C000Q	PANEL A220Z5 VSC CMO/SM0Z131D01	
	N52G6020001 HB	panel protector film	
	N45G 88607004 HQ	PE BAG FOR SKD 78-D019961	
	N45G 52001	PE SHEET	
	N40G000296824A	POP LABEL- 77-D022273	
	80GL22708DE	POWER BOARD/27-D018867	main source
	80GL22700YY	POWER BOARD/27-D018868	
	089G414A18NIS6	POWER CORD 32E1818021	
	089G414A18NISC	POWER CORD 32E1818021	
	089G414A18N YH	POWER CORD(32E1818021)	main source
	N40G000296813B ZA	QC PASS LABEL	
	705GN734133 ZY	REAR ASSY 40-D021927	
	N40G0001968 2A	S/N LABEL 7741513161	
	N40G000196858A	S/N LABEL- 77-D022383	
	F40G 22N96821B	SAFETY LABEL	
	002G6008 2	SCREW 42-D015647	
	0M1G 330 4120	SCREW 42A9930008	
	0M1G1740 10120	SCREW 42A9940008	
	0Q1G 330 5120	SCREW 42-D003574	
	0M1G1740 8120	SCREW FOR STD/MF 42-D020715/42-D000649	
	705GN734131 ZY	SEAT ASS'Y 40-D021922	
	N52G 1VSC002 HY	Security Tape- 7345511002	
	N44GC010VSC 1A	Shipping Draw- 79-D022372	
	705GN734134 ZY	STAND ASS'Y 40-D021930	
	F40G000296822B ZA	Supplier label	

	N52G 2191 01	TAPE /7345911004	
	N41G780P968 1A	WARRANTY CARD- 78-D021250	
	050G 600 1 W	WHITE STRAP	
	095G8014 2N00	WIRE HARNESS 2P-2P 20MM/32-D016783	
	095G8014 2N01	WIRE HARNESS 2P-2P 40MM/32-D015712	
	P45G 77001	enlace film	

12. Different parts list

Diversity of TC6MNBBDTNWVWNND compared with TC6MNBBDTNWVWN			
Location	Part No.	Description	Remark
	KEPC7NC1	KEY BOARD/35-D021770	
	F40G 22N96821B	SAFETY LABEL	

Diversity of TC6MNBHKNWVSN compared with TC6MNBBDTNWVWN			
Location	Part No.	Description	Remark
	N41G220296821A	MANUAL 76-D022374	
	089G402A18N YH	POWER CORD(32-D022438)(美規)	
	089G402A18N IS	POWER CORD/(TPV 共用)32-D022438	
	089G402A18NISC	POWER CORD/32-D022438	

Diversity of TC6MNBHKNWVSNND compared with TC6MNBBDTNWVWN			
Location	Part No.	Description	Remark
	KEPC7NC1	KEY BOARD/35-D021770	
	N41G220296821A	MANUAL 76-D022374	
	089G402A18N YH	POWER CORD(32-D022438)(美規)	
	089G402A18N IS	POWER CORD/(TPV 共用)32-D022438	
	089G402A18NISC	POWER CORD/32-D022438	
	F40G 22N96821B	SAFETY LABEL	

Diversity of TC6MNBDDNWVSNNN compared with TC6MNBBDTNWVWN			
Location	Part No.	Description	Remark
	N40G000296811C ZA	Customer label on Carton	
	089G414A18NIS6	POWER CORD 32E1818021	
	089G414A18NISC	POWER CORD 32E1818021	
	089G414A18N YH	POWER CORD(32E1818021)(中規)	
	N40G000296813B ZA	QC PASS LABEL	
	N40G000196858A	S/N LABEL- 77-D022383	
	N40G000296822B ZA	Supplier label	
	N41G780P968 1A	WARRANTY CARD- 78-D021250	

Diversity of TC6MNBDDNWVSNNND compared with TC6MNBBDTNWVWN			
Location	Part No.	Description	Remark
	N40G000296811C ZA	Customer label on Carton	
	KEPC7NC1	KEY BOARD/35-D021770	
	089G414A18NIS6	POWER CORD 32E1818021	
	089G414A18NISC	POWER CORD 32E1818021	

	089G414A18N YH	POWER CORD(32E1818021)(中規)	
	N40G000296813B ZA	QC PASS LABEL	
	N40G000196858A	S/N LABEL- 77-D022383	
	F40G 22N96821B	SAFETY LABEL	
	F40G000296822B ZA	Supplier label	
	N41G780P968 1A	WARRANTY CARD- 78-D021250	

*** Reader's Response***

Dear Readers:

Thank you in advance for your feedback on our Service Manual, which allows continuous improvement of our products. We would appreciate your completion of the Assessment Matrix below, for return to ViewSonic Corporation.

Assessment

A. What do you think about the content of this Service Manual?

<i>Unit</i>	<i>Excellent</i>	<i>Good</i>	<i>Fair</i>	<i>Bad</i>
1. Precautions and Safety Notices				
2. Specification				
3. Front Panel Function Control Description				
4. Circuit Description				
5. Adjustment Procedure				
6. Troubleshooting Flow Chart				
7. Block Diagrams				
8. Schematic Diagrams				
9. PCB Layout Diagrams				
10. Exploded Diagram and Exploded Parts List				
11. Recommended Spare Parts List				

B. Are you satisfied with this Service Manual?

<i>Item</i>	<i>Excellent</i>	<i>Good</i>	<i>Fair</i>	<i>Bad</i>
1. Service Manual Content				
2. Service Manual Layout				
3. The form and listing				

C. Do you have any other opinions or suggestions regarding this service manual?

Reader's basic data:

Name:		Title:	
Company:			
Add:			
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After completing this form, please return it to ViewSonic Quality Assurance in the USA at facsimile 1-909-839-7943. You may also e-mail any suggestions to the Director, Quality Systems & Processes (marc.maupin@viewsonic.com)